Air Quality
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

SHEILA C. HOLMAN
Director

February XX, 2016

Mr. Ronald Bazinet
Site Leader
Hexion Inc. – Acme Operations
333 Neils Eddy Road
Riegelwood, North Carolina 28456

SUBJECT: Air Quality Permit No. 01394T46
Facility ID: 2400093
Hexion Inc. – Acme Operations
Riegelwood, Columbus County
Fee Class: Title V
PSD Status: Minor

Dear Mr. Bazinet:

In accordance with your completed Air Quality Permit Application for a significant modification of a Title V permit received June 4, 2014, we are forwarding herewith Air Quality Permit No. 01394T46 to Hexion Inc. – Acme Operations located in Riegelwood, North Carolina authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 2Q .0503 have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3 of this permit. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of GS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of GS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B.

Columbus County has been triggered for increment tracking under PSD for SO_2, NO_x, and PM10. However, no changes in actual emissions of these pollutants are associated with this permit modification.

This Air Quality Permit shall be effective from February XX, 2016 until May 31, 2017, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. Should you have any questions concerning this matter, please contact Ms. Betty Gatano at (919) 707-8736 or Betty.Gatano@ncdenr.gov.

Sincerely,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

cc: Heather Ceron, EPA Region 4
Wilmington Regional Office
Central Files
Connie Horne (cover letter only)

ATTACHMENT to Permit No. 01394T46

Insignificant Activities per 15A NCAC 2Q .0503(8)

Emission Source ID No.	Emission Source Description
IQA/QC	QA/QC Laboratories
IES-T2 **MACT G, ww2**	Blend Hexamine Tank #1 (12,000 gal capacity)
IES-T3 **MACT G, ww2**	Blend Hexamine Tank #2 (12,000 gal capacity)
IES-T4 **MACT G, ww2**	Blend Hexamine Tank #3 (9,000 gal capacity)
IES-T5 **MACT G, ww2**	Blend Hexamine Tank #4 (8,800 gal capacity)
IES-T6 **MACT G, ww2**	Blend Hexamine Tank #5 (6,100 gal capacity)
IES-T52 **MACT G, ww2**	Liquid Hexamine Storage Tank #6 (22,000 gal capacity)
IES-IT6 **MACT FFFF, ww2**	Resin Distillate and Wastewater Feed Tank No. 7 (12,000 gal capacity)
IES-T44 and IES-T46 **MACT FFFF, ww2**	Two Resin Distillate and Wastewater Feed Tanks (10,150 gal capacity each)
IT1	100,000 gallon Wastewater Storage Tank
IT2	45,000 gallon Anhydrous Ammonia Tank
IT4	12,000 gallon Acetone Tank
IT5	10,000 gallon Sodium Hydroxide Tank
IT9	1,000 gallon Diesel fuel tank
IT10	1,000 gallon Gasoline fuel tank
IT11	9,765 gallon Fuel oil tank
IT14	8,900 gallon Washing Solution
IT34	1,500 gallon Condensate/Boiler feed tank
IT35	6,000 gallon Condensate/Boiler feed tank
IT36	1,300 gallon Methanol Recycle Tank #1
IT37	5,400 gallon Heat Transfer Fluid Tank
IT38	2,000 gallon Heat Transfer Fluid Recirculation Tank
IT39	4,000 gallon B-Liquor tank
IT41	9,700 gallon DIDP oil tank
IT42	8,364 gallon TEA tank

Emission Source ID No.	Emission Source Description
IT47	8,000 gallon Sulfuric Acid tank
IT52	750 gallon Hot Well tank
I-004-T3	100,000 gallon Storm Water Storage Tank

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 2D .1100, "Control of Toxic Air Pollutants," or 15A NCAC 2Q .0711, "Emission Rates Requiring a Permit."
3. For additional information regarding the applicability of GACT see the DAQ page titled "The Regulatory Guide for Insignificant Activities/Permits Exempt Activities." The link to this site is as follows: http://daq.state.nc.us/permits/insig/

Summary of Changes to Permit

The following changes were made to the Hexion Inc. – Acme Operations, Riegelwood, Air Permit No. 01394T46:

Pages	Section	Description of Changes
Cover and throughout	-	Updated all dates and permit revision numbers.
--	Insignificant Activities	• Removed the methanol drum loading operation (ID No. IMDL). • Removed the solids feed system to hexamine tanks #3 and #4 (ID No. ISF). • Removed the 30,000 gallon Propane Tank (ID No. IT3). • Modified the contents of tank (ID No. IT14). It now stores washing solution. • Removed 50 gallon the recovac tank (ID No. IT46). • Moved tanks (ID Nos. IES-T2 through IES-T6 and IES-T52) to the insignificant activities list, renamed them, and labeled them as "MACT G, ww2" sources. • Moved resin and distillate wastewater feed tanks (ID Nos. IES-IT6, IES-T44, and IES-T45) to the insignificant activities list, renamed them, and labeled them as "MACT FFFF, ww2" sources.
3 – 6	1.0 Equipment List	• Removed the product recovery adsorption columns (ID Nos. ES-002-01.5 and ES-002-01.7). • Removed the formaldehyde drum filing process (ID No. ES-002-03). • Corrected the capacity of the hexamine hold tank, surge tank, and feed tank. • Removed asterisks and footnote for minor modification for emission sources (ID Nos. S4, S5, and ES-004-T12) • Identified tanks (ID Nos. ES-001-02.8-5 and ES-001-02.8-6) as subject MACT Subpart H. • Moved tanks (ID Nos. ES-T2 through ES-T6 and ES-T52) to the insignificant activities list and renamed them. These tanks were included on the permit because they were subject to NC Air Toxics. Under this modification, they were identified as subject to a MACT and are exempt from NC Air Toxics, per 15A NCAC 2Q .0702(a)(27). • Moved resin and distillate wastewater feed tanks (ID Nos. ES-IT6, ES-T44, and ES-T45 to the insignificant activities list and renamed them. These tanks were included on the permit because they were subject to NC Air Toxics. Under this modification, they were identified as subject to a MACT and are exempt from NC Air Toxics, per 15A NCAC 2Q .0702(a)(27). • Added MACT labels for emission sources (ID Nos. ES-002-Fug01, ES-001-Fug03, ES-007.1, ES-007.2, ES-007.3, ES-007.5, and ES-007.6).
7	2.1.A – Regulations Table	Removed reference to 15A NCAC 2D .1100. The boiler (ID No. ES-001-01) is subject to the Case-by-Case MACT and is exempt from air toxics per 15A NCAC 2Q .0702(a)(27).
9	2.1.A.4.b	Corrected dates to indicate the boilers will be subject to the "NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters," 40 CFR Part 63, Subpart DDDDD beginning May 20, 2019.

Pages	Section	Description of Changes
11	2.1.B – Regulations Table	Removed reference to 15A NCAC 2D .1100. The formaldehyde process is subject to the "NESHAP from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater," (aka HON) 40 CFR 63 Subpart G, and is exempt from air toxics per 15A NCAC 2Q .0702(a)(27).
11 – 13	2.1.B.1.	• Revised permit condition for the HON to allow for alternative monitoring of the electrically-heated catalytic oxidizer (ID No. CD-002-01a). • Removed references to bypassing the oxidizer. The unit does not have a diversion stack or bypass valve.
15	2.1.D – Regulations Table	Removed reference to 15A NCAC 2D .1100. The formaldehyde storage tanks are subject to the HON and are exempt from air toxics per 15A NCAC 2Q .0702(a)(27).
16	2.1.E – Regulations Table	Removed reference to 15A NCAC 2D .1100. The formaldehyde transfer rack is subject to the HON and is exempt from air toxics per 15A NCAC 2Q .0702(a)(27).
16	2.1.F	Removed formaldehyde drum filling (ID No. ES-002-03) from permit. This condition will be listed as reserved to prevent renumber the remainder of the permit.
16	2.1.G – Regulations Table	Removed reference to 15A NCAC 2D .1100. The special projects process is subject to the "NESHAP for Miscellaneous Organic Chemical Manufacturing," 40 CFR 63 Subpart FFF, and is exempt from air toxics per 15A NCAC 2Q .0702(a)(27).
21	2.1.H – Equipment List	Rearranged the list of emission sources to clarify that tanks (ID Nos. ES-001-002.8-5 and ES-001-002.8-6) are not controlled by the catalytic oxidizer (ID No. CD-001-02b).
21	2.1.H – Regulations Table	Specified that only emissions sources (ID Nos. ES-001-02.1 through ES-001-02.8-4) are subject to 40 CFR 63 Subpart G.
22	2.1.H.1	Clarified the emissions sources (ID Nos. ES-001-02.1 through ES-001-02.8-4) are subject to 40 CFR 63 Subpart G.
28	2.1.I.1 – Equipment List	Updated the list of tanks.
28	2.1.I – Regulations Table	Added reference to the HON for emission sources (ID Nos. ES-007.1, ES-007.2, ES-007.3, ES-007.5, and ES-007.6).
29	2.1.I.3	Added permit condition for 40 CFR Part 63, Subpart G, Group 2 Wastewater Requirements for emission sources (ID Nos. ES-007.1, ES-007.2, ES-007.3, ES-007.5, and ES-007.6).
35	2.2.A – Regulations Table	Added reference to surge control vessels (ID Nos. ES-001-002.8-5 and ES-001-002.8-6).
43	2.2.B.3	Revised the permit condition for15A NCAC 2D .1100 to remove reference to all emission sources subject to a MACT. Such sources are exempt from air toxics per 15A NCAC 2Q .0702(a)(27).
44 – 52	3.0	Updated the General Conditions and the List of Acronyms to the most current version (V4.0: 12/17/2015).

State of North Carolina
Department of Environmental Quality
Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
01394T46	01394T45	February XX, 2016	May 31, 2017

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 2D and 2Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 2Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee:	**Hexion Inc. – Acme Operations**
Facility ID:	**2400093**
Facility Site Location:	**333 Neils Eddy Road**
City, County, State, Zip:	**Riegelwood, Columbus County, North Carolina 28456**
Mailing Address:	**333 Neils Eddy Road**
City, State, Zip:	**Riegelwood, North Carolina, 28456**
Application Number:	**2400093.14A**
Complete Application Date:	**June 4, 2014**
Primary SIC Code:	**2869**
Division of Air Quality, Regional Office Address:	**Wilmington Regional Office 127 Cardinal Drive Extension Wilmington, NC 28405**

Permit issued this the XXth day of February, 2016

_____

William D. Willets, P.E., Chief, Air Permits Section
By Authority of the Environmental Management Commission

Table of Contents

SECTION 1 - PERMITTED EMISSION SOURCES AND ASSOCIATED AIR POLLUTION CONTROL DEVICES AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Formaldehyde CMPU				
15, 39	ES-002-01.1 ES-002-01.2 ES-002-01.3 ES-002-01.4 ES-002-01.6 ES-002-01.8 **MACT G, pv1**	Formaldehyde process: reactor, reactor, reactor, ambient air blowers, product recovery absorption column product recovery absorption column	CD-002-01a	One electrically-heated catalytic oxidizer
18, 39	S4* and S5* **MACT G, sv1**	Two methanol storage tanks (40,300 gallon capacity each)		
19, 39	ES-004-T6 **MACT G, sv2** ES-004-T9 **MACT G, sv2** ES-004-T10 **MACT G, sv2** ES-004-T11 **MACT G, sv2** ES-004-T12* **MACT G, sv2**	Formaldehyde storage tank (12,000 gal capacity) Formaldehyde storage tank (30,000 gal capacity) Formaldehyde storage tank (100,000 gal capacity) Formaldehyde storage tank (30,000 gal capacity) Formaldehyde storage tank (30,000 gal capacity)	CD-002-01b	One scrubber
19, 39	ES-002-02 **MACT G, to2**	Formaldehyde transfer racks for truck loading and unloading equipped with a vacuum vapor collection system		
39	ES-002-Fug01 **MACT H**	Formaldehyde CMPU fugitive emissions	N/A	N/A
Special Projects CMPU				
20, 39	ES-002-05a **MACT FFFF, bpv2**	Resin Catch Tank (5,000 gal capacity)	CD-002-05a	One condenser
	ES-002-05b **MACT FFFF, bpv2**	Reactor (6,000 gal capacity)	CD-002-05b	One condenser
	ES-002-05c **MACT FFFF, bpv2**	Reactor (5,000 gal capacity)	CD-002-05c	One condenser
	ES-002-05d **MACT FFFF, tr2**	Resin product truck loading operation	N/A	N/A
	ES-T8 **MACT FFFF, sv2**	Aniline Storage Tank (5,000 gal capacity)	N/A	N/A

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
20, 39	ES-T17 **MACT FFFF, sv2**	Formaldehyde Nurse Tank (1,500 gal capacity)	N/A	N/A
	ES-T23 **MACT FFFF, sv2**	Resin Tank #1 (8,364 gal capacity)	N/A	N/A
	ES-T24 **MACT FFFF, sv2**	Resin Tank #2 (7,000 gal capacity)	N/A	N/A
	ES-T25 **MACT FFFF, sv2**	Resin Tank #3 (6,000 gal capacity)	N/A	N/A
	ES-T26 **MACT FFFF, sv2**	Resin Tank #4 (20,000 gal capacity)	N/A	N/A
	ES-T33 **MACT FFFF, sv2**	Process Water Tank (6,200 gal capacity)	N/A	N/A
	ES-T43 **MACT FFFF, sv2**	Groutwright Tank (4,000 gal capacity)	N/A	N/A
	ES-T51 **MACT FFFF, sv2**	Special Projects Storage Tank (22,000 gal capacity)	N/A	N/A
	ES-002-05ww1 **MACT FFFF, ww1**	Wastewater Storage Tank; fixed-roof (5,000 gal capacity)	N/A	N/A
	ES-002-05ww2 **MACT FFFF, ww1**	Wastewater Steam Stripper	CD-002-01a	One electrically-heated catalytic oxidizer
39	ES-002-Fug02 **MACT FFFF**	Special Projects CMPU fugitive emissions	N/A	N/A
Hexamine CMPU				
25, 39	ES-001-02.1 ES-001-02.2 ES-001-02.3 ES-001-02.4 ES-001-02.6 **MACT G, pv1**	Hexamine process reactor Hexamine process evaporator Hexamine process crystallizer Hexamine process crystallizer Hexamine process centrifuge	CD-001-02b	One natural gas/LPG-fired catalytic oxidizer
	ES-001-02.8-1 ES-001-02.8-2 ES-001-02.8-3 ES-001-02.8-4 **MACT G, pv1**	Hexamine age tank (12,000 gallon) Hexamine hold tank (10,000 gallon) Hexamine surge tank (2,900 gallon) Hexamine feed tank (6,100 gallon)		
	ES-001-02f **MACT G, ww1**	Air stripper for hexamine byproduct water		
47	ES-NH3[!]	Aqua Ammonia Unloading Operations		
	ES-NH3-Tanks[!]	Aqueous Ammonia Tanks		
25	ES-001-04	Hexamine dryer	CD-001-02d	One bagfilter (7,200 square feet of filter area)
	ES-001-05	Granular Hexamine pneumatic transfer system for transport of granular Hexamine from the Hexamine CMPU dryer and screen to the granular bagging operation		
25	ES-001-06	Pneumatic free-flow product transfer system	CD-001-02c	One cartridge filter (2,400 square feet of filter area)
25	ES-001-07	Free-flow (pulverized) Hexamine bagging operation	CD-001-02e	One cartridge filter; 3,040 square feet of filter area

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
25	ES-001-02.8-5 **MACT H**	Hexamine rerun tank (800 gallon)		
25	ES-001-02.8-6 **MACT H**	Hexamine distillation feed tank (5,000 gallon)	N/A	N/A
25, 39	ES-001-08 **MACT G, tr2**	Hexamine loading rack	N/A	N/A
39	ES-001-Fug03 **MACT H**	Hexamine fugitive emissions	N/A	N/A
Other				
11	ES-001-01 **Case-By-Case MACT**	Natural Gas/No. 2/No. 5/No. 6 fuel oil-fired Boiler (24.0 million Btu per hour heat input)	N/A	N/A
34, 47	ES-001-01T **NSPS Dc**	Back-up boiler; Natural Gas/No. 2/No. 5/No. 6 fuel oil-fired (maximum heat input less than 30 million Btu per hour)	N/A	N/A
31	ES-003-03	Cooling tower		
	ES-003-05	Cooling tower	N/A	N/A
	ES-003-06	Cooling tower	N/A	N/A
	ES-005	Lined pond at wastewater treatment and associated wastewater streams	N/A	N/A
31, 39	ES-007.1 **MACT G, ww2**	Environmental Regeneration Tank #5 (26,000 gal capacity)	N/A	N/A
	ES-007.2 **MACT G, ww2**	Environmental Regeneration Tank #1 (19,100 gal capacity)	N/A	N/A
	ES-007.3 **MACT G, ww2**	Environmental Regeneration Tank #2 (30,000 gal capacity)	N/A	N/A
	ES-007.5 **MACT G, ww2**	Environmental Intermediate Tank #6 (20,000 gal capacity)	N/A	N/A
	ES-007.6 **MACT G, ww2**	Environmental Intermediate Tank #5 (20,000 gal capacity)	N/A	N/A
31	ES-007.7	Wastewater tank for the hexamine CMPU (22,000 gal capacity)	N/A	N/A
	ES-007.8	Wastewater tank for the hexamine CMPU (22,000 gal capacity)	N/A	N/A
	ES-007.9	Wastewater tank for the hexamine CMPU (22,000 gal capacity)	N/A	N/A
	ES-007.10	Wastewater tanks for the hexamine CMPU (22,000 gal capacity)	N/A	N/A
38	ES-POTW[!]	Publicly-owned wastewater treatment works, including two biotreatment areas, a pre-equalization tank, a post-equalization tank, a digester, and a sand filter	N/A	N/A

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
47	ES-T27[!]	Environmental Feed Tank #1 (18,500 gal capacity)	N/A	N/A
	ES-T28[!]	Environmental Feed Tank #2 (18,500 gal capacity)	N/A	N/A
	ES-T29[!]	Environmental Feed Tank #3 (20,000 gal capacity)	N/A	N/A
	ES-T30[!]	Environmental Intermediate Tank #1 (20,000 gal capacity)	N/A	N/A
	ES-T31[!]	Environmental Intermediate Tank #2 (20,000 gal capacity)	N/A	N/A
	ES-T32[!]	Environmental Intermediate Tank #3 (20,000 gal capacity)	N/A	N/A
	ES-T53[!]	Green Overheads Wastewater Tank (10,000 gal capacity)	N/A	N/A

[!] This is an insignificant source pursuant to 15A NCAC 2Q .0503(8) that is subject to state-enforceable only requirements.

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1 - Emission Source(s) and Control Devices(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

A. Natural Gas/No. 2/No. 5/No. 6 Fuel Oil-fired Boiler (ID No. ES-001-01)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.48 pounds per million Btu heat input	15A NCAC 2D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Filterable PM Mercury Carbon Monoxide Hazardous Air Pollutants	*For No. 6 & No. 5 Fuel Oil Firing* 0.45 lb/mmBtu 2.0e-05 lb/mmBtu 28 ppmvd at 7% O_2 *For No. 2 Fuel Oil & Natural Gas Firing* Best Combustion Practices	15A NCAC 2D .1109
Sulfur dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas, No. 2, No. 5 and No. 6 fuel oil that are discharged from this source into the atmosphere shall not exceed 0.48 pounds per million Btu heat input.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1.A.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas or No. 2/No. 5/No. 6 fuel oil in this source.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.A.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping is required for sulfur dioxide emissions from natural gas or No. 2 fuel oil for this source.

d. The maximum sulfur content of any No. 5 fuel oil or No. 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit. [15A NCAC 2Q .0508(bb)]

e. To assure compliance, the Permittee shall monitor the sulfur content of the No. 5 fuel oil and No. 6 fuel oil by using fuel oil supplier certification per shipment received. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
   i. The name of the fuel oil supplier;
   ii. The maximum sulfur content of the fuel oil received during the quarter;
   iii. The method used to determine the maximum sulfur content of the fuel oil; and
   iv. A certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the No.5 fuel oil and No. 6 fuel oil fired during the period.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the oil is not monitored and recorded.

Reporting [15A NCAC 2Q .0508(f)]

f. The Permittee shall submit a summary report of the fuel oil supplier certifications postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this boiler **(ID No. ES-001-01)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.A.3.a. **(ID No. ES-001-01)** above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas or No. 2 fuel oil in this source.

d. To assure compliance while combusting No. 5 fuel oil or No. 6 fuel oil, once a day the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semiannual period. If the emission source is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1.A.3.a. above

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

e. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date and time of each recorded action;
   ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. The results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

f. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2D .1109: Case-by-Case MACT

a. The initial compliance date for the emission limitations and associated monitoring, recordkeeping, and reporting requirements listed below is **December 16, 2013**. These conditions need not be included on the annual compliance certification until after the initial compliance date. These limits apply except for periods of startup, shutdown, and malfunction. The Permittee shall follow the procedures in 15A NCAC 2D .0535 for any excess emissions that occur during periods of startup, shutdown, or malfunction.

b. The Permittee shall comply with this 15A NCAC 2D .1109 [CAA § 112(j)] standard until **May 19, 2019**. The initial compliance date for the applicable CAA § 112(d) standard for ''National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters" is **May 20, 2019**.

c. Emissions from these sources shall not exceed the emissions limitations listed below as a result of firing No. 5 and/or No. 6 fuel oil:
   i. Filterable PM: 0.45 lb/mmBtu
   ii. Mercury (Hg): 2.0e-05 lb/mmBtu
   iii. Carbon Monoxide (CO): 28 ppmvd, corrected to 7% oxygen

   These emissions shall only apply if the boiler fires at least 10% residual fuel oil on an annual average heat input basis. If the Permittee fires less than 10% residual fuel oil, these emissions limitations and the associated compliance testing shall not apply. However, the Permittee shall retain records of the fuels fired in the boiler in accordance with Section 2.1 A.4.g. of this permit

Work Practice Standards [15A NCAC 2Q .0508(f)]

d. For emissions from No. 2 fuel oil and natural gas product gas firing at the affected combustion source, the Permittee shall perform an annual boiler inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
   i. Inspect the burner, and clean or replace any components of the burner as necessary;
   ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,
   iii. Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly.

   The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if the affected boilers are not inspected and maintained as required above.

e. The results of any required annual burner inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date of each recorded action;
   ii. The results of each inspection; and,
   iii. The results of any maintenance performed on the boilers.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if these records are not maintained.

Compliance Testing [15A NCAC 2Q .0508(f)]

f. To demonstrate compliance with the standards provided in Section 2.1 A.4.c. above, the Permittee shall conduct compliance tests for each listed pollutant. The Permittee may choose either of the following methods for the compliance tests:
   i. Initial & Periodic Stack Testing. Stack testing shall be performed in accordance with General Condition JJ in Section 3 of this permit. Tests may not be conducted during periods of startup, shutdown, or malfunction. Following the initial compliance test, the Permittee shall test the boiler annually. Each stack test shall be conducted between 11 and 13 months after the previous stack test. However, if a stack test shows that the emission rate of any pollutant is less than or equal to 80 percent of the allowable limit, the stack test frequency shall be reduced to once every five years for that pollutant.
   ii. Periodic Fuel Analysis. The Permittee may use a fuel analysis to demonstrate compliance with the mercury standard. Fuel analyses shall be conducted annually. Following the initial fuel analysis, each analysis shall be conducted between 11 and 13 months after the previous analysis. If a fuel analysis shows a potential exceedance of an emission limitation in Section 2.1 A.4.c., the Permittee shall conduct a follow-up stack test of the affected source within 90 days. If the follow-up stack test shows an exceedance of the limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109.

The initial compliance test shall be conducted within 180 days of the initial compliance date. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if the required compliance tests are not conducted, or if the results of a compliance test exceed a limit in Section 2.1 A.4.c. above.

Recordkeeping [15A NCAC 2Q .0508(f)]

g. If the Permittee limits residual fuel oil firing to less than 10% on an annual average heat input basis, it shall create and retain the following records at least once per calendar month:
   i. Record the fuel use by each affected source, including the type(s) of fuel and amount(s) used, during the previous calendar month; and,
   ii. Calculate the annual average heat input from residual fuel oil for each affected source during the previous 12-month period.

   If the annual average heat input is equal to or greater than 10% for any 12-month period, the Permittee shall conduct an initial compliance test within 60 days following the end of the 12-month period. Monitoring and recordkeeping requirements associated with residual fuel oil firing shall be implemented as soon as practicable, and in no case later than 60 days following the end of the 12-month period. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if it fails to comply with the recordkeeping requirements.
h. Maintain a copy of each notification and report required by this standard, including all documentation supporting any Notification of Compliance Status. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if it fails to comply with the recordkeeping requirements
i. Maintain records of performance tests and fuel analyses. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if it fails to comply with the recordkeeping requirements.

Reporting [15A NCAC 2Q .0508(f)]

j. Notification of Compliance Status. The Permittee must submit a Notification of Compliance Status that meets the requirements of 40 CFR 63.9(h)(2)(ii) before the close of business on the 60th day following the completion of the final required performance test and/or other initial compliance demonstration. The Notification of Compliance Status report must contain the following information, as applicable:
   i. A description of the affected source(s) including identification of which subcategory the source is in, the capacity of the source, a description of the add-on controls used on the source description of the fuel(s) burned, and justification for the fuel(s) burned during the performance test.
   ii. Summary of the results of all performance tests and calculations conducted to demonstrate initial compliance.
   iii. A certification signed by the Responsible Official that the facility has met all applicable emission limits and work practice standards.
k. Semiannual Summary Report. The Permittee shall submit a summary report postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The first summary report shall be required on July 30, 2014. The report shall include the following:
   i. Company name and address;
   ii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
   iii. Date of report and beginning and ending dates of the reporting period;
   iv. A summary of the results of the annual performance tests;
   v. Signed statement indicating that no new types of fuel were fired in the affected sources.

B. Formaldehyde CMPU consisting of three (3) reactors (ID Nos. ES-002-01.1 through ES-002-01.3), ambient air blowers (ID No. ES-002-01.4), and two (2) product recovery absorption columns (ID Nos. ES-002-01.6 and ES-002-01.8) controlled by an electrically-heated catalytic oxidizer (ID No. CD-002-01a)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	98% reduction or 20 ppm or TRE > 1.0	15A NCAC 2D .1111 *40 CFR 63, Subpart G*
Visible emissions	40 percent opacity	15A NCAC 2D .0521
Hazardous Air Pollutants	LDAR program and equipment specifications (See Section 2.2. A.1 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Hazardous Air Pollutants	Closed vent system requirements (See Section 2.2. A.2 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Volatile Organic Compounds	Work practice standards (See Section 2.2. B.1 – Multiple Emission Sources)	15A NCAC 2D .0958
Sulfur dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Odors	*State Enforceable Only* – Control and Prohibition of Odorous Emissions (See Section 2.2. B.4 – Multiple Emission Sources)	15A NCAC 2D. 1806

1. 15A NCAC 2D .1111: MACT for 40 CFR 63, SUBPART G: HAZARDOUS ORGANIC NESHAP ("HON") for GROUP 1 PROCESS VENTS

a. For the formaldehyde CMPU **(ID No. ES-002-01)**, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subparts A, F, G, and H.

Emission Standard [15A NCAC 2D .1111]

b. Pursuant to 40 CFR 63.113 the Permittee shall comply with the following requirements:
   i. HAP emissions from the formaldehyde CMPU **(ID No. ES-002-01)** shall be controlled by the catalytic oxidizer **(ID No. CD-002-01a)**.
   ii. HAP emissions from the formaldehyde CMPU **(ID No. ES-002-01)** controlled by the catalytic oxidizer **(ID No. CD-002-01a)** shall be reduced by at least 98% or to an exhaust concentration of 20 ppm, whichever is less stringent. [40 CFR 63.113(a)(2)]

Testing [15A NCAC 2Q .0508(f)]

c. The Permittee shall conduct performance tests as required by 40 CFR 63, Subpart G or as required in writing by DAQ. If emissions testing is required or otherwise performed by the Permittee for purposes of complying with 40 CFR 63 Subpart G, the testing shall be performed in accordance with 40 CFR 63.116, 40 CFR 63.7, and General Condition JJ. If the testing demonstrates the least stringent limit given in Section 2.1 B.1.b.ii above is exceeded, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Operating Parameters

d. The Permittee shall maintain the daily average temperature of the vent stream immediately before the catalyst bed at or above 505°F. [40 CFR 63.114(c), 40 CFR 63.151(g)(5)]

Monitoring [15A NCAC 2Q .0508(f)]

e. An excursion shall be a failure to comply with the daily average temperature and/or insufficient monitoring data to determine compliance. Multiple failures occurring during the same daily averaging period shall count as one excursion. Monitoring data that is not collected is considered an excursion unless it is due to startup, shutdown, malfunction, or non-operation. The Permittee is allowed one excursion per semiannual reporting period. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 for each excursion beyond the allowed exception. [40 CFR 63.152(c)(2)(ii)(A), 40 CFR 63.152(c)(2)(ii)(C), 40 CFR 63.152(c)(2)(ii)(B)(6)]

f. The Permittee shall use temperature monitoring devices with continuous recorder(s) installed in the gas stream

immediately before the catalyst bed. Monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. The Permittee shall be in noncompliance if these requirements are not met. [40 CFR 63.114(a)(1)(ii), 40 CFR 63.114(c)]

g. The Permittee shall monitor the catalytic oxidizer **(ID No. CD-002-01a)** as follows:
   i. The Permittee shall conduct annual inspections of catalyst activity in accordance with a written plan. The plan shall be submitted to the DAQ regional office for approval and maintained on site. The plan shall specify the testing procedures used to determine the catalyst activity using a micro gas chromatograph.
   ii. The Permittee shall conduct an annual internal visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, the Permittee must take corrective action consistent with the manufacturer's recommendations and conduct a catalyst activity check within 30 days of completing corrective actions.

   [40 CFR 63.114(c)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the above requirements are not met or if a catalyst activity check shows an exceedance of the limit in Section 2.1 B.1.b.ii, except as provided in Section 2.1 B.1.e.

Recordkeeping [15A NCAC 2Q .0508(f), 40 CFR 63.118(a), 40 CFR 63.151(g) for Alternative Monitoring]

h. The Permittee shall continuously record temperature upstream of the catalyst bed and shall record the daily average value of the continuously monitored upstream temperature for each operating day (defined as midnight to midnight) in according with the following procedures [40 CFR 63.152(f)]:
   i. Daily averages shall consist of an average temperature for the operating day for the upstream temperature. If all recorded values during an operating day are within the operating range, a statement to this effect can be recorded instead of the daily average.
   ii. Records of the daily average temperature values for each operating day shall be determined according to the procedures specified below:
      (A) the monitoring system shall measure data values at least once every 15 minutes;
      (B) the Permittee shall record either:
         (1) each measured data value; or
         (2) block average values for 15-minute or shorter periods calculated from all measured data values during each period; or
         (3) at least one measured data value per minute if measured more frequently than once per minute.
      (C) If the daily average temperature for a given operating day is within the permitted limit, the Permittee shall retain either:
         (1) block hourly average values for that operating day for five years and discard the 15-minute or more frequent average values and readings at the end of the day; or
         (2) retain all the data for five years.
      (D) If the daily average temperature for a given operating day is outside the temperature limit, the Permittee shall retain the data recorded that operating day for five years.
      (E) Daily average temperature shall be calculated for each operating day, and retained for five years, unless all recorded values are within the limits or except as specified below in (F) and (G).
         (1) The daily average shall be calculated as the average of all values for a monitored temperature recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.
         (2) The operating day shall be from midnight to midnight.
      (F) If all recorded values for a monitored temperature during an operating day are within the limit, the Permittee may record that all values were within the range and retain this record for five years rather than calculating and recording a daily average for that operating day. For these operating days, the records required in (C) above shall also be retained for 5 years.
      (G) Monitoring data recorded during periods specified in (1) through (6) below shall not be included in any calculated average. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.
         (1) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;
         (2) Startups;
         (3) Shutdowns;
         (4) Malfunctions;
         (5) Performance Tests; and
         (6) Periods of non-operation of the chemical manufacturing process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the above requirements are not met or if the daily average temperature shows an exceedance of the limit in Section 2.1 B.1.b.ii, except as provided in Section 2.1 B.1.e.

i. The Permittee shall maintain records of each annual internal inspection of the catalyst bed, the results of the annual catalyst activity checks, and any actions taken on the catalytic oxidizer. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records are not maintained.

j. The Permittee shall maintain the following record for the lock and key or other similar device on each of the oxidizer diversion stacks:
   i. Records of the monthly visual inspections of the lock and key or similar devices maintained on each oxidizer diversion stack.
   ii. Records of the duration of all periods that the key is checked out or emissions are otherwise diverted from the oxidizer.

   [40 CFR 63.114(d), 40 CFR 63.118(a)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records are not maintained.

k. The Permittee shall keep records up-to-date and readily accessible. [40 CFR 63.118(a)]

l. The Permittee shall also retain the following records and plans:
   i. Pursuant to 40 CFR 63.117, the Permittee shall maintain records of data from performance tests conducted for purposes of complying with 40 CFR 63 Subpart G including:
      (A) Parameter monitoring results averaged over the test period, and
      (B) Percent reduction of organic HAP or concentration.
   ii. Pursuant to 40 CFR 63.6(e)(3), the Permittee shall develop and implement a written startup, shutdown, and malfunction plan. As required by 40 CFR 63.10, records shall be maintained of times, dates, durations, causes, reasons, actions taken, and other pertinent information related to any startup, shutdown, or malfunction.
   iii. Pursuant to 40 CFR 63.6(e), at all times including periods of startup, shutdown, and malfunction, the Permittee shall operate and maintain the affected source and associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emission at least to the levels required by all relevant standards. As required by 40 CFR 63.10, records of all calibrations, checks, and maintenance activities shall be maintained and kept readily available.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the required plans and records are not created and retained as required above.

Reporting [15A NCAC 2Q .0508(f)]

m. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The periodic report shall include the following:
   i. All daily average upstream temperatures that are less than the established operating temperature.
   ii. The results of the annual internal catalyst checks and any maintenance performed on the catalytic oxidizer.
   iii. The results of the annual catalyst activity check.
   iv. All operating days when insufficient monitoring data are collected.
   v. The duration of periods when monitoring data is not collected for each excursion. An excursion is any of the following cases:
      (A) When the daily average temperature value is less than permitted limit.
      (B) When the period of control device operation is four hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.
      (C) When the period of control device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.
      (D) When insufficient catalyst activity is determined during the annual catalyst activity check.
   vi. All periods when the key is checked out or emissions are otherwise diverted from the oxidizer.
   vii. The results of any performance tests as required by 40 CFR 63.117.

   [40 CFR 63.118(f), 40 CFR 63.152(c)]

n. The Permittee shall submit semiannual startup, shutdown, and malfunction reports as required under 40 CFR 63.10(d)(5)(i) and immediate startup, shutdown, and malfunction reports as required under 40 CFR 63.10(d)(5)(ii).

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the formaldehyde CMPU **(ID No. ES 002-01)** controlled by the catalytic oxidizer **(ID No. CD-002-01a)** shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.B.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring, recordkeeping, or reporting is required to demonstrate compliance with this visible emissions standard.

C. Two Methanol Storage Tanks (ID Nos. S4, and S5) with an associated catalytic oxidizer (ID No. CD-002-01a)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	95% emissions reduction at the catalytic oxidizer	15A NCAC 2D .1111 *40 CFR 63, Subpart G*
Hazardous Air Pollutants	LDAR program and equipment specifications (See Section 2.2. A.1 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Hazardous Air Pollutants	Closed vent system requirements (See Section 2.2. A.2 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Volatile Organic Compounds	Work practice standards (See Section 2.2. B.1 – Multiple Emission Sources)	15A NCAC 2D .0958
Sulfur dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Odors	*State Enforceable Only* – Control and Prohibition of Odorous Emissions (See Section 2.2. B.4 – Multiple Emission Sources)	15A NCAC 2D. 1806

1. 15A NCAC 2D .1111: MACT for 40 CFR 63, SUBPART G: HAZARDOUS ORGANIC NESHAP ("HON") for GROUP 1 STORAGE VESSELS

a. For the methanol storage tanks **(ID Nos. S4 and S5)**, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subparts A, F, G, and H.

Emission Standard [15A NCAC 2D .1111]

b. The Permittee shall route all organic HAP emissions from the methanol storage tanks to the catalytic oxidizer **(ID No. CD-002-01a)**, which shall reduce inlet organic HAP emissions by at least 95% by weight. The catalytic oxidizer shall be operated at all times and emissions from the methanol storage tanks routed to the unit, except:
   i. During periods of startup, shutdown, and malfunction as allowed in 40 CFR 63.102(a)(1),
   ii. The liquid level in the storage vessel is not increased, or
   iii. The total aggregate amount of time during which the emissions bypass the catalytic oxidizer during the calendar year, for all reasons (with exceptions specified in 40 CFR 63.119(f)(3)(iii)), shall not exceed 240 hours.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the requirements listed above are not met. **[**40 CFR 63.119**]**

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. The Permittee shall maintain readily accessible records showing the dimensions of the storage vessels and an analysis showing the capacity of the storage vessel. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not created and retained. [40 CFR 63.123(a)]

d. For periods that emissions from the methanol storage tanks bypass the catalytic oxidizer, the Permittee shall maintain readily accessible records of:
   i. The reason it was necessary to bypass the catalytic oxidizer,
   ii. The duration of the period the catalytic oxidizer was bypassed, and

iii. Documentation or certification of compliance with the applicable provisions of 40 CFR 63.119(f)(3)(i) through 40 CFR 63.119(f)(3)(iii) allowing the catalytic oxidizer to be bypassed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit periodic reports according to the schedule in 40 CFR 63.152. These reports shall be due within 60 days after the end of each 6-month period. The applicable reporting periods for this affected source are July through December and January through June. The periodic reports shall include all times when organic HAP emissions from the methanol storage tanks **(ID Nos. S4 and S5)** are not routed to the catalytic oxidizer including specific dates, times, total amounts of time and the reasons, for each event during which the emissions bypass the catalytic oxidizer. All other instances of deviations from the requirements of this permit must be clearly identified.

D. Five Formaldehyde Storage Tanks (ID No. ES-004-T6, ES-004-T9, ES-004-T10, ES-004-T11, and ES-004-T12) controlled by scrubber (ID No. CD-002-01b)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Keep readily accessible records of dimensions and capacity	15A NCAC 2D .1111 *40 CFR 63, Subpart G*
Hazardous Air Pollutants	LDAR program and equipment specifications (See Section 2.2. A.1 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Hazardous Air Pollutants	Closed vent system requirements (See Section 2.2. A.2 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Volatile Organic Compounds	Work practice standards (See Section 2.2. B.1 – Multiple Emission Sources)	15A NCAC 2D .0958
Sulfur dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Odors	*State Enforceable Only* – Control and Prohibition of Odorous Emissions (See Section 2.2. B.4 – Multiple Emission Sources)	15A NCAC 2D. 1806

1. 15A NCAC 2D .1111: MACT for 40 CFR 63, SUBPART G: HAZARDOUS ORGANIC NESHAP ("HON") for GROUP 2 STORAGE VESSELS

a. For the formaldehyde storage tanks **(ID No. ES-004)**, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subparts F, G, and H.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

b. The Permittee shall maintain readily accessible records showing the dimensions of the storage vessels and an analysis showing the capacity of the storage vessel. [40 CFR 63.123(a)]

E. Formaldehyde Transfer Rack equipped with a Vacuum Vapor Collection System (ID No. ES-002-02) controlled by a scrubber (ID No. CD-002-01b)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Keep readily accessible records	15A NCAC 2D .1111 *40 CFR 63, Subpart G*
Hazardous Air Pollutants	LDAR program and equipment specifications (See Section 2.2. A.1 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Hazardous Air Pollutants	Closed vent system requirements (See Section 2.2. A.2 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Volatile Organic Compounds	Work practice standards (See Section 2.2. B.1 – Multiple Emission Sources)	15A NCAC 2D .0958

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Odors	*State Enforceable Only* – Control and Prohibition of Odorous Emissions (See Section 2.2. B.4 – Multiple Emission Sources)	15A NCAC 2D. 1806

1. 15A NCAC 2D .1111: MACT for 40 CFR 63, SUBPART G: HAZARDOUS ORGANIC NESHAP ("HON") for GROUP 2 TRANSFER OPERATIONS

a. For the formaldehyde transfer rack **(ID No. ES-002-02)**, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subparts F, G, and H.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

b. The Permittee shall maintain records as specified in 40 CFR 63.130(f) including the following:
   i. An analysis demonstrating the design and actual annual throughput of the transfer rack,
   ii. An analysis documenting the weight percent organic HAPs in the liquid loaded, and
   iii. Documentation that only organic HAP s with a partial pressure less than 10.3 kPa are transferred.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained. [40 CFR 63.126(c)]

F. Reserved

G. Special Projects CMPU (ID No. ES-002-05) consisting of:

- **One resin catch tank (ID No. ES-002-05a) controlled by a condenser (ID No. CD-002-05a);**
- **Two reactors (ID Nos. ES-002-05b and ES-002-05c) controlled by condensers (ID Nos. CD-002-05b and CD-002-05c);**
- **Eight storage vessels (ID Nos. ES-T8, ES-T17, ES-T23, ES-T24, ES-T25, ES-T26, ES-T43, and ES-T51);**
- **One resin product truck loading operation (ID No. ES-002-05d);**
- **Process Water Tank (ID No. ES-T33);**
- **Wastewater Storage Tank (ID No. ES-002-05ww1); and,**
- **Wastewater Steam Stripper (ID No. ES-002-05ww2) with an associated electrically-heated catalytic oxidizer (ID No. CD-002-01a).**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	**Affected Sources: Resin Catch Tank and Reactors (ID Nos. ES-002-05a, ES-002-05b, and ES-002-05c)** MON requirements for Group 2 batch process vents	15A NCAC 2D .1111 *40 CFR 63, Subpart FFFF*
Hazardous Air Pollutants	**Affected Sources: Storage Vessels (ID Nos. ES-T8, ES-T17, ES-T23, ES-T24, ES-T25, ES-T26, ES-T43, ES-T51, and ES-T33)** MON requirements for Group 2 storage vessels.	15A NCAC 2D .1111 *40 CFR 63, Subpart FFFF*
Hazardous Air Pollutants	**Affected Source: Transfer Rack (ID No. ES-002-05d)** MON requirements for Group 2 transfer racks.	15A NCAC 2D .1111 *40 CFR 63, Subpart FFFF*
Hazardous Air Pollutants	**Affected Sources: Wastewater System (ID Nos. ES-002-05ww1 and ES-002-05ww2)** MON requirements for Group 1 wastewater treatment systems.	15A NCAC 2D .1111 *40 CFR 63, Subpart FFFF*
Hazardous Air Pollutants	LDAR program and equipment specifications (See Section 2.2. A.1 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart FFFF*

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Closed vent system requirements (See Section 2.2. A.2 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart FFFF*
Volatile Organic Compounds	Work practice standards (See Section 2.2. B.1 – Multiple Emission Sources)	15A NCAC 2D .0958
Sulfur Dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Odors	*State Enforceable Only* – Control and Prohibition of Odorous Emissions (See Section 2.2. B.4 – Multiple Emission Sources)	15A NCAC 2D. 1806

1. 15A NCAC 2D .1111: MACT for 40 CFR 63, Subpart FFFF: MISCELLANEOUS ORGANIC NESHAP ("MON") for GROUP 2 BATCH PROCESS VENTS

a. For the resin catch tank and reactors at the Special Projects MCPU **(ID Nos. ES-002-05a, ES-002-05b, and ES-002-05c)**, the Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subpart A and FFFF.

Emission Standards [15A NCAC 2D .1111]

b. To remain Group 2 batch process vents, the collective uncontrolled organic HAP emissions from all of the batch process vents **(ID Nos. ES-002-05a, ES-002-05b, and ES-002-05c)** shall be less than 10,000 pounds per year. If the process vents change from Group 2 to Group 1, the Permittee shall meet the following requirements:
   i. If the Special Project MCPU has operated as a Group 2 batch process vent for at least 1 year (i.e., the vent has shown compliance with the 10,000 lb/yr for at least 365 days), report the switch to a Group 1 batch process vent in the next semiannual compliance report in accordance with 40 CFR 63.2520(e)(10)(i).
   ii. If the Special Project MCPU has not operated as a Group 2 batch process vent for at least 1 year, provide a 60-day advance notice of the change to a Group 1 batch process vent in accordance with 40 CFR 63.2520(e)(10)(ii).
   iii. Submit a test report for the Group 1 batch process vent in the next semiannual compliance report.
   [40 CFR 63.2550, 40 CFR 63.3460(b)(6)]

Testing [15A NCAC 2Q .0508(f)]

c. If emissions testing is performed in accordance with General Condition JJ and the results do not comply with the applicable standard(s), the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The Permittee shall create and maintain records of the following:
   i. A record of the day each batch was completed;
   ii. A record of whether each batch operated was considered a standard batch;
   iii. The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch; and
   iv. Records of the daily 365-day rolling summations of emissions, or alternative records that correlate to the emissions (e.g., number of batches), calculated no less frequently than once per calendar month.
   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to create and maintain the records described above. [40 CFR 63.2525(e)(4)]

e. The Permittee shall retain a record of each operating scenario at the Special Projects MCPU as follows:
   i. A description of the process and the type of process equipment used.
   ii. Identification of related process vents, wastewater point of determination (POD), storage tanks, and transfer racks.
   iii. Applicable control requirements for each affected source, including each vent, and if applicable:
      (A) The control device or treatment process used.
      (B) Identification of process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).
      (C) Applicable monitoring requirements and any parametric level that assures compliance for all emissions routed to the control device or treatment process.
   iv. Calculations and engineering analyses required to demonstrate compliance.
   v. Changes to any of the elements listed above which have not been previously reported to the NCDAQ.
   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to create and maintain the

records described above. [40 CFR 63.2525(b)]

f. The Permittee shall retain a schedule or log of operating scenarios for the batch operations updated each time a different operating scenario is put into effect. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to create and maintain a log of the batch operations as described above. [40 CFR 63.2525(c)]

Reporting [15A NCAC 2Q .0508(f)]

g. Advanced Notification of a Process Change. Submit a report 60 days before the scheduled implementation date of any of the changes identified below:
   i. Any change to the information contained in the precompliance report.
   ii. A change in the status of a control device from small to large.
   iii. A change from Group 2 to Group 1 for any emission point except for batch process vents that meet the conditions specified in Section 2.1.G.1.b.i. of this permit.

h. Semiannual Compliance Report. The Permittee shall submit a semiannual compliance report postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The periodic reports shall include the following, as applicable:
   i. Company name and address.
   ii. Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.
   iii. Date of report and beginning and ending dates of the reporting period.
   iv. If uncontrolled HAP emissions exceed the limit 10,000 lbs/yr during any consecutive 365-day period, include the records associated with the emissions calculations required in Section 2.1.G.1.d. of this permit.
   v. Except where advanced notification is required as provided in Section 2.1.G.1.g. of this permit, provide a notification of any process change, or change to any of the information submitted in the notification of compliance status report or a previous compliance report that is not within the scope of an existing operating scenario. A process change does not include moving within a range of conditions identified in the standard batch, and a nonstandard batch does not constitute a process change. The notification must include all of the following information:
      (A) A description of the process change.
      (B) Revisions to any of the information reported in the original notification of compliance status report.
      (C) Information required by the notification of compliance status report pursuant to 40 CFR 63.2520(d) for changes involving the addition of processes or equipment at the affected source.
      [40 CFR 63.2520(e)(5)]

2. 15A NCAC 2D .1111: MACT for 40 CFR 63, Subpart FFFF: MISCELLANEOUS ORGANIC NESHAP ("MON") for GROUP 2 STORAGE VESSELS

a. For the storage vessels at the Special Projects MCPU **(ID Nos. ES-T8, ES-T17, ES-T23, ES-T24, ES-T25, ES-T26, ES-T43, ES-T51, and ES-T33)**, the Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subpart A and FFFF.

Emission Standards [15A NCAC 2D .1111]

b. To remain Group 2 storage vessels, the following limitations apply:
   i. The storage capacity of the vessel must be less than 10,000 gallons; and,
   ii. The material stored must have a maximum true vapor pressure of total HAP less than 6.9 kilopascals (kPa).
   [40 CFR 63.2550]

Recordkeeping [15A NCAC 2Q .0508(f)]

c. The Permittee shall create and maintain records of the capacity and maximum true vapor pressures of total HAP at each affected storage tank. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to create and maintain the records described above.

Reporting [15A NCAC 2Q .0508(f)]

d. Advanced Notification of a Process Change. Submit a report 60 days before the scheduled implementation date of any of the changes identified below:
   i. Any change to the information contained in the precompliance report.
   ii. A change in the status of a control device from small to large.
   iii. A change from Group 2 to Group 1 for any storage vessel.

3. 15A NCAC 2D .1111: MACT for 40 CFR 63, Subpart FFFF: MISCELLANEOUS ORGANIC NESHAP ("MON") for GROUP 2 TRANFER RACKS

a. For the resin product truck loading operation at the Special Projects MCPU **(ID No. ES-002-05d)**, the Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subpart A and FFFF.

Recordkeeping [15A NCAC 2Q .0508(f)]

b. The Permittee shall create the following record and update it at least once per calendar year:
   i. An analysis demonstrating the design and actual annual throughput of the transfer rack;
   ii. An analysis documenting the weight-percent organic HAP in the liquid loaded. Examples of acceptable documentation include but are not limited to analyses of the material and engineering calculations; and,
   iii. An analysis documenting the annual rack-weighted average HAP partial pressure of the transfer rack. Because the loading rack is only permitted to load resin product, which has a partial pressure less than 1.5 kPa, the Permittee need only maintain documentation of the organic HAP that is transferred.

   The required records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records are not created and maintained.

4. 15A NCAC 2D .1111: MACT for 40 CFR 63, Subpart FFFF: MISCELLANEOUS ORGANIC NESHAP ("MON") for GROUP 1 WASTEWATER STREAMS

a. For the wastewater system at the Special Projects MCPU **(ID Nos. ES-002-05ww1 and ES-002-05ww2)**, the Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subpart A and FFFF.

Emission and Work Practice Standards [15A NCAC 2D .1111]

b. Wastewater Storage Tank. The Permittee shall operate and maintain a fixed roof on the Wastewater Storage Tank **(ID No. ES-002-05ww1)**. [40 CFR 63.2485(a), 40 CFR 63.133(a)(1)]

c. Process Wastewater Stream – Treatment Requirements. The Permittee shall operate and maintain the steam stripper **(ID No. ES-002-05ww2)** so that it meets the following requirements:
   i. Maintain a minimum active column height of 5 meters;
   ii. Maintain a countercurrent flow configuration with a minimum of 10 actual trays;
   iii. Maintain a minimum steam flow rate of 0.04 kilograms of steam per liter of wastewater feed within the column;
   iv. Maintain a minimum wastewater feed temperature to the steam stripper of 95 °C, or minimum column operating temperature of 95 °C;
   v. Maintain a maximum liquid loading of 67,100 liters per hour per square meter; and,
   vi. Operate at nominal atmospheric pressure.

   Compliance with all monitored parameters shall be based on a daily average. [40 CFR 63.2485(a), 40 CFR 63.138(d), 40 CFR 63.143(f)]

d. Process Wastewater Stream – Control Requirements. Whenever organic HAP are vented from the steam stripper **(ID No. ES-002-05ww2)**, the associated catalytic oxidizer **(ID No. CD-002-01a)** shall be operating.
   i. The catalytic oxidizer shall either reduce HAP by at least 95% by weight or achieve an outlet total organic compound concentration, less methane and ethane, or total organic HAP concentration of 20 ppmv.
   ii. To demonstrate compliance with this control requirement, the Permittee shall operate and monitor the catalytic oxidizer and maintain records as required in Section 2.1.B.1.d. though h. of this permit.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to meet the requirements listed above. [40 CFR 63.2485(a), 40 CFR 63.143(f)]

e. Maintenance Wastewater Streams. Prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:
   i. Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities;
   ii. Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and,
   iii. Specify the procedures to be followed when clearing materials from process equipment.

   Modify and update the information above as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure. Incorporate these procedures as part

of the startup, shutdown, and malfunction plan required under §63.6(e)(3). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to create, maintain, and record the maintenance procedures as required above. [40 CFR 63.2485(a), 40 CFR 63.105]

f. Ketone Aldehyde CMPU Process Wastewater (Certain Liquid Streams in Open Systems). The process wastewater stream shall comply with the requirements in 40 CFR 63.149, including the following:
   i. The following types of equipment shall be equipped with a tightly fitting solid cover:
      (A) Drains and drain hubs;
      (B) Manholes;
      (C) Lift stations; and,
      (D) Trenches.
   ii. Each pipe shall have no visible gaps in joints, seals, or other emission interfaces;
   iii. Maintain a fixed roof on any associated tank, including the resin distillate tank **(ID No. ES-T53)**.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to comply with the requirements above. [40 CFR 63.2485(l), 40 CFR 63.149]

Testing [15A NCAC 2Q .0508(f)]

g. If emissions testing is performed in accordance with General Condition JJ and the results do not comply with the control standards provided in Section 2.1.G.4.d. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Inspections and Maintenance [15A NCAC 2Q .0508(f)]

h. The Permittee shall visually inspect the wastewater tank **(ID No. ES-002-05ww1)** semiannually for improper work practices. Improper work practices include, but are not limited to, leaving open any access door or other opening when such door or opening is not in use. The results of any the required inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date of each inspection;
   ii. The results of each inspection; and,
   iii. The results of any maintenance performed on the boilers.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to conduct inspections as described above, or if the required records are not created and maintained. [40 CFR 63.2485(a), 40 CFR 63.133(f), 40 CFR 63.143(a), 40 CFR 63.147(b)(1)]

i. Except as provided in the delay of repair provisions in 40 CFR 63.140, if gaps, cracks, tears, or holes are observed in ductwork, piping, or connections to wastewater treatment system (including covers and control devices), a first effort to repair shall be made as soon as practical but no later than 5 calendar days after identification. Repair shall be completed no later than 15 calendar days after identification or discovery of the defect. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to repair defects in the wastewater treatment system as described above. [40 CFR 63.2485(a), 40 CFR 63.139(f)]

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

j. The Permittee shall continuously monitor and record the following operating parameters of the steam stripper **(ID No. ES-002-05ww2)**:
   i. Steam flow rate
   ii. Wastewater feed mass flow rate; and
   iii. Either:
      (A) Wastewater feed temperature; or
      (B) Column operating temperature

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to conduct monitoring or recordkeeping as required above, or if the monitored operating parameters do not meet the requirements of Section 2.1.G.4.c. above. [40 CFR 63.2485(a), 40 CFR 63.143(b), 40 CFR 63.147(b)(5)]

k. The Permittee shall continuously monitor and record the temperature difference across the catalyst bed of the catalytic oxidizer **(ID No. CD-002-01a)** using a temperature monitoring device installed in gas stream immediately before and after catalyst bed and equipped with a continuous recorder. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to conduct monitoring or recordkeeping as required above, or if the monitored operating parameters do not meet the requirements of Section 2.1.G.4.d. above. [40 CFR 63.2485(a), 40 CFR 63.143(e)(1), 40 CFR 63.147(b)(5)]

Reporting [15A NCAC 2Q .0508(f)]

l. The Permittee shall submit Semiannual Periodic Reports within 60 days after the end of each 6-month period. The applicable reporting periods for this affected source are July through December and January through June. The

periodic reports shall include ….

i. The results of each semiannual visual tank inspection in which a defect was identified, including the date of the inspection, identification of each waste management unit in which a control equipment failure was detected, description of the failure, and description of the nature of and date the repair was made.
ii. Monitoring results for each operating day during which the daily average value of a continuously monitored parameter is outside the allowable range.

[40 CFR 63.2485(a), 40 CFR 63.146(c)-(d)]

H. Hexamine CMPU consisting of:

- **Hexamine production facility (ID Nos. ES-001-02.1 through ES-001-02.4, ES-001-02.6, and ES-001-02.8-1 through ES-001-02.8-4) with an associated natural gas/LPG-fired catalytic oxidizer (ID No. CD-001-02b)**
- **Air stripper for hexamine byproduct water (ID No. ES-001-02f) with an associated natural gas/LPG-fired catalytic oxidizer (ID No. CD-001-02b)**
- **Hexamine dryer (ID No. ES-001-04) with bagfilter (ID No. CD-001-02d)**
- **Granular hexamine pneumatic transfer system (ID No. ES-001-05) with bagfilter (ID No. CD-001-02d)**
- **Pneumatic free-flow product transfer system (ID No. ES-001-06) with cartridge filter (ID No. CD-001-02c)**
- **Free-flow (pulverized) hexamine bagging operation (ID No. ES-001-07) with cartridge filter (ID No. CD-001-02e)**
- **Liquid hexamine loading rack (ID No. ES-001-08)**
- **Hexamine rerun tank (ID No. ES-001-02.8-5)**
- **Hexamine distillation feed tank (ID No. ES-001-02.8-6)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Organic Hazardous Air Pollutants	**Affected Sources: ES-001-02.1 through ES-001-02.8-4** Organic HAP emissions shall be reduced by at least 98 weight percent or to a concentration of 20 parts per million by volume.	15A NCAC 2D .1111 *40 CFR 63, Subpart G*
Organic Hazardous Air Pollutants	**Affected Source: ES-001-02f** Reduce the mass flow rate of methanol in the wastewater stream by at least 31% by weight. Organic HAP emissions shall be reduced by at least 95 weight percent.	15A NCAC 2D .1111 *40 CFR 63, Subpart G*
Organic Hazardous Air Pollutants	**Affected Source: ES-001-08** Recordkeeping requirement for a Group 2 loading rack	15A NCAC 2D .1111 *40 CFR 63, Subpart G*
Particulate Matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
Visible emissions	40 percent opacity, or 20 percent opacity, as provided in Section 2.1.H.5.	15A NCAC 2D .0521
Hazardous Air Pollutants	LDAR program and equipment specifications (See Section 2.2. A.1 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Hazardous Air Pollutants	Closed vent system requirements (See Section 2.2. A.2 – Multiple Emission Sources)	15A NCAC 2D .1111 *40 CFR 63, Subpart H*
Volatile Organic Compounds	Work practice standards (See Section 2.2. B.1 – Multiple Emission Sources)	15A NCAC 2D .0958
Sulfur dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Toxic Air Pollutants	*State Enforceable Only* – Control of Toxic Air Pollutants (See Section 2.2. B.3 – Multiple Emission Sources)	15A NCAC 2D. 1100

Regulated Pollutant	Limits/Standards	Applicable Regulation
Odors	*State Enforceable Only* – Control and Prohibition of Odorous Emissions (See Section 2.2. B.4 – Multiple Emission Sources)	15A NCAC 2D. 1806

1. 15A NCAC 2D .1111: MACT for 40 CFR 63, Subpart G: HAZARDOUS ORGANIC NESHAP ("HON") for GROUP 1 PROCESS VENTS

a. For the Group 1 process vents in the Hexamine production facility **(ID Nos. ES-001-02.1 through ES-001-02.8-4)**, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subparts A, F, G, and H.

Emission Standards [15A NCAC 2D .1111]

b. The Permittee shall control emissions of total organic HAP from the Group 1 process vents **(ID Nos. ES-001-02.1 through ES-001-02.8-4)** by at least 98 weight percent or to a concentration of 20 parts per million by volume, whichever is less stringent, using the catalytic oxidizer **(ID No. CD-001-02b)**. The catalytic oxidizer shall control emissions from the vent headers at all times except as provided in the startup, shutdown and malfunction plan. [40 CFR 63.113(a)(2), 40 CFR 63.102(a)]

Testing [15A NCAC 2Q .0508(f)]

c. If emissions testing is performed in accordance with General Condition JJ and the results do not comply with the control standards provided in Section 2.1.H.1.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Operating Standards [15A NCAC 2D .1111]

d. The Permittee shall maintain the daily average inlet temperature of the gas stream entering catalytic oxidizer **(ID No. CD-001-02b)** at greater than or equal to 798°F. The inlet temperature of the gas stream shall be measured immediately before entering the catalyst bed. [40 CFR 63.114(c) and 40 CFR 63.151(f)]

Bypass Requirements [15A NCAC 2Q .0508(f)]

e. For any bypass line between the origin of a gas stream and the point where the gas stream reaches the process vent that could divert the gas stream directly to the atmosphere, the Permittee shall secure the bypass line valve in the non-diverting position with a car seal or a lock-and-key type configuration.
   i. Conduct a visual inspection of the seal or closure mechanism at least once every month to ensure that the valve is maintained in the non-diverting position and the gas stream is not diverted through the bypass line.
   ii. Create and retain the following records:
      A. The date and results of each visual inspection;
      B. The duration of all periods when the seal mechanism broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out; and,
      C. A record of each instance when and car-seal has broken.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these requirements are not met at any affected bypass line. [40 CFR 63.114(d), 40 CFR 63.118(a)(4)]

Monitoring [15A NCAC 2Q .0508(f)]

f. The Permittee shall install, calibrate, maintain, and operate a continuous temperature monitoring device located in the gas stream immediately before the catalyst bed. The monitoring system shall comply with the requirements of 40 CFR 63.152(f). Monitoring data are insufficient to constitute a valid hour of data if measured values are unavailable for any of the 15-minute periods within the hour. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 it fails to monitor the inlet gas stream as provided above. [40 CFR 63.114(a)(1)(ii), 40 CFR 63.152(c)(2)(ii)(A)(4)]

g. The Permittee shall check the activity level of the catalyst at least once every 12 months and take any necessary corrective action, such as replacing the catalyst to ensure that the catalyst is performing as designed. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if it fails to check the activity level of the catalyst as provided above. [40 CFR 63.114(c) and 40 CFR 63.151(f)]

Recordkeeping [15A NCAC 2Q .0508(f)]

h. The Permittee shall maintain the following records:
   i. Continuous records of the upstream temperature of the gas stream immediately before entering the catalyst bed.
   ii. The daily average value of the gas stream temperature immediately before entering the catalyst bed. The daily average shall be established for the period beginning at midnight and ending the following midnight. If all recorded values during an operating day are above the minimum allowable value, a statement to this effect can be recorded instead of the calculated daily average.
   iii. A record of each annual check of the catalyst activity level, including:
      (A) The date of the check;
      (B) The catalyst activity level; and,
      (C) A description of any subsequent corrective actions, including the nature and date of the action.
   iv. A record of the monthly visual inspection of the seals or closure mechanism on any control device bypass line, including the date and results of the inspection. Record the duration of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records listed above are not maintained or if one or more unexcused excursions of the monitored inlet temperature occur during a reporting period. The Permittee is allowed one excused excursion per reporting period pursuant to 40 CFR 63.152(c)(2)(ii)(B), except as provided in 40 CFR 63.152(c)(2)(ii)(C). [40 CFR 63.118(a), 40 CFR 63.152(c)(2)(ii), 40 CFR 63.152(f)(6)]

i. The Permittee shall maintain an up-to-date, readily accessible record of:
   i. The inlet temperature of the gas stream immediately before entering the catalyst bed from the performance test for the catalytic oxidizer, averaged over the same time period as the duration of the performance test; and,
   ii. The percent reduction of organic HAP or TOC achieved by the catalytic oxidizer determined or the concentration of organic HAP or TOC (ppmv, by compound), determined as specified in 40 CFR 63.116(c).

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained. [40 CFR 63.117(a)(1)]

j. The Permittee shall develop and maintain a written startup, shutdown, and malfunction (SSM) plan. As required by 40 CFR 63.10, records shall be maintained of times, dates, durations, causes, reasons, actions taken, and other pertinent information related to any startup, shutdown, or malfunction. At all times, including periods of SSM, the Permittee shall operate and maintain the affected source and associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. [40 CFR 63.6(e)]

Reporting [15A NCAC 2Q .0508(f)]

k. The Permittee shall submit Semiannual Periodic Reports within 60 days after the end of each 6-month period. The applicable reporting periods for this affected source are July through December and January through June. The periodic reports shall include:
   i. A record of all excused and unexcused excursions occurring during the monitoring period including:
      (A) The daily average values of the inlet temperature of the catalyst bed for all operating days outside the established range.
      (B) The duration of periods when monitoring data were not collected for any excursions caused by lack of monitoring data, including:
         (1) Periods when the catalytic oxidizer is in operation 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent for the operation hours.
         (2) Periods when the catalytic oxidizer is in operation less than 4 hours in an operation data and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.
   ii. A record of any catalyst activity level checks performed during the reporting period, including the date of the check, the activity level, and a description of any subsequent corrective actions taken.
   iii. The times and duration of all periods when the gas stream is diverted to the atmosphere through a bypass line.
   iv. If any TRE determinations or performance tests are conducted after the Notification of Compliance Status has been submitted, report the parameter monitoring results for the catalytic incinerator (i.e., the inlet gas stream temperature immediately before entering the catalyst bed) specified in 40 CFR 63, Subpart G, Table 3, averaged over the same time period of the performance testing, and the percent reduction of organic HAP or TOC achieved by the incinerator determined or the concentration of organic HAP or TOC (ppmv, by compound), determined as specified in 40 CFR 63.116(c).
   v. All instances of deviations from the requirements of this permit must be clearly identified.

   [40 CFR 63.117(a)(3), 40 CFR 63.118(f)]

l. The Permittee shall submit semiannual SSM reports, including the information specified in 40 CFR 63.10(d)(5)(i). SSM Reports shall only be required if a startup or shutdown caused the source to exceed any applicable emission limitation, or if a malfunction occurred during the reporting period. The SSM reports may be submitted on the same schedule as the semiannual Periodic Report. [40 CFR 63.152(d)]

m. The Permittee shall submit immediate SSM reports as required under 40 CFR 63.10(d)(5)(ii), and in accordance with the procedures provided in General Condition I.A. of this permit. [40 CFR 63.152(d)]

2. 15A NCAC 2D .1111: MACT for 40 CFR 63, Subpart G: HAZARDOUS ORGANIC NESHAP ("HON") for GROUP 1 WASTEWATER STREAMS

b. For the hexamine by-product water air stripper **(ID No. ES-001-02f)**, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subparts A, F, G, and H.

Control Standards [15A NCAC 2D .1111]

c. The Permittee shall use the air stripper **(ID No. ES-001-02f)** to reduce the mass flow rate of methanol by at least 31% by weight, which is the fraction removal (Fr) rate for methanol provided in 40 CFR 63, Subpart G, Table 9. [40 CFR 63.132(a)(2)(ii), 40 CFR 63.138(e)(2)]

d. The Permittee shall control emissions of total organic HAP from the air stripper **(ID No. ES-001-02f)** by at least 95 weight percent or greater using the catalytic oxidizer **(ID No. CD-001-02b)**. [40 CFR 63.138(a)(5), 40 CFR 63.139(c)(i)]

Testing [15A NCAC 2Q .0508(f)]

e. If emissions testing is performed in accordance with General Condition JJ and the results do not comply with the control standards provided in Section 2.1.H.2.b. or c. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Operating Standards [15A NCAC 2D .1111]

f. The Permittee shall maintain the operating parameters of the air stripper **(ID No. ES-001-02f)** as follows:
   i. The wastewater feed flow rate shall not exceed 3,180 gal/hour (daily average);
   ii. The wastewater feed temperature shall be greater than 180 degrees F (daily average); and,
   iii. The air flow rate shall be greater than 2,200 cubic feet per minute (daily average).
   [40 CFR 63.143(d), Table 12]

g. The air stripper may be equipped with pressure relief devices that vent directly to the atmosphere, provided the devices are not used for planned or routine venting of emissions. The devices shall remain in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the air stripper in accordance with good engineering and safety practices. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these requirements are not met. [40 CFR 63.132(a)(2)(i)(A)-(B)]

Monitoring [15A NCAC 2Q .0508(f)]

h. The Permittee shall install, calibrate, maintain, and operate:
   i. A continuous temperature monitoring device in the wastewater feed;
   ii. A continuous flow monitor in the wastewater feed; and,
   iii. A continuous flow monitor on the air feed to the air stripper.
   The monitoring system shall comply with the requirements of 40 CFR 63.152(f). Monitoring data are insufficient to constitute a valid hour of data if measured values are unavailable for any of the 15-minute periods within the hour. [40 CFR 63.132(a)(2)(iii), 40 CFR 63.143(d)]

i. The Permittee shall comply with the monitoring/recordkeeping/reporting requirements in accordance with Section 2.1.H.1.g.-k. of this permit to demonstrate compliance with Section 2.1.H.2.c. above. [40 CFR 63.139(d)(2)(ii), 40 CFR 63.143(e)(1)]

Recordkeeping [15A NCAC 2Q .0508(f)]

j. The Permittee shall create and maintain the following records:
   i. Continuous records of the wastewater feed flow rate and temperature and the air feed flow rate to the air stripper.
   ii. The daily average value of the wastewater feed flow rate entering the air stripper. If all recorded values during an operating day are below the maximum allowable value, a statement to this effect can be recorded instead of the calculated daily average.

iii. The daily average value of the wastewater feed temperature entering the air stripper. If all recorded values during an operating day are above the minimum allowable value, a statement to this effect can be recorded instead of the calculated daily average; and,
iv. The daily average value of the air feed flow rate entering the air stripper. If all recorded values during an operating day are above the minimum allowable value, a statement to this effect can be recorded instead of the calculated daily average.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records of the monitoring results are not maintained or if one or more unexcused excursions of a monitored parameter occur during a reporting period. The Permittee is allowed one excused excursion per reporting period pursuant to 40 CFR 63.152(c)(2)(ii)(B), except as provided in 40 CFR 63.152(c)(2)(ii)(C). [40 CFR 63.132(a)(2)(iv), 40 CFR 63.147(b)(4)]

Reporting [15A NCAC 2Q .0508(f)]

k. The Permittee shall submit Semiannual Periodic Reports within 60 days after the end of each 6-month period. The applicable reporting periods for this affected source are July through December and January through June. The periodic reports shall include:
   i. The monitoring results for each operating day during which the daily average value of any monitored parameter was outside the range established Section 2.1.H.2.e. of this permit; and,
   ii. All instances of deviations from the requirements of this permit must be clearly identified.

   [40 CFR 63.132(a)(2)(iv), 40 CFR 63.146(c)-(d)]
l. The Permittee shall submit semiannual SSM reports, including the information specified in 40 CFR 63.10(d)(5)(i). SSM Reports shall only be required if a startup or shutdown caused the source to exceed any applicable emission limitation, or if a malfunction occurred during the reporting period. The SSM reports may be submitted on the same schedule as the semiannual Periodic Report. [40 CFR 63.152(d)]
m. The Permittee shall submit immediate SSM reports as required under 40 CFR 63.10(d)(5)(ii), and in accordance with the procedures provided in General Condition I.A. of this permit. [40 CFR 63.152(d)]

3. 15A NCAC 2D .1111: MACT for 40 CFR 63, Subpart G: HAZARDOUS ORGANIC NESHAP ("HON") for GROUP 2 TRANSFER RACKS

a. For the hexamine loading rack **(ID No. ES-001-08)**, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology," (MACT) as promulgated in 40 CFR 63, Subparts A, F, G, and H.

Recordkeeping [15A NCAC 2Q .0508(f)]

b. The Permittee shall create the following record and update it at least once per calendar year:
   i. An analysis demonstrating the design and actual annual throughput of the transfer rack;
   ii. An analysis documenting the weight-percent organic HAP in the liquid loaded. Examples of acceptable documentation include but are not limited to analyses of the material and engineering calculations; and,
   iii. An analysis documenting the annual rack weighted average HAP partial pressure of the transfer rack. Because the loading rack is only permitted to load liquid hexamine, which has a partial pressure less than 10.3 kPa, the Permittee need only maintain documentation of the organic HAP that is transferred.

   The required records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records are not created and maintained. 40 CFR 63.126(c), 40 CFR 63.130(f)]

4. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the Hexamine dryer **(ID No. ES-001-04)**, granular Hexamine pneumatic transfer system **(ID No. ES-001-05)**, pneumatic free-flow product transfer system **(ID No. ES-001-06)**, and the free-flow (pulverized) Hexamine bagging operation **(ID No. ES-001-07)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where, E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.H.4.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. Particulate matter emissions from the Hexamine dryer **(ID No. ES-001-04)** and granular Hexamine pneumatic transfer system **(ID No. ES-001-05)** shall be controlled by the bagfilter **(ID No. CD-001-02d)**. Particulate matter emissions from the pneumatic free-flow product transfer system **(ID No. ES-001-06)** shall be controlled by the cartridge filter **(ID No. CD-001-02c)**. Particulate matter emissions from the free-flow (pulverized) Hexamine bagging operation **(ID No. ES-001-07)** shall be controlled by the cartridge filter **(ID No. CD-001-02e)**. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. A monthly visual inspection of the system ductwork and material collection unit for leaks; and
   ii. An annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's and cartridge filter's structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and control devices are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date and time of each recorded action;
   ii. The results of each inspection;
   iii. The results of any maintenance performed on the bagfilters and cartridge filters and
   iv. Any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit the results of any maintenance performed on the bagfilters and cartridge filters within 30 days of a written request by the DAQ.

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the Hexamine production facility **(ID No. ES-001-02)** and free-flow (pulverized) hexamine bagging operation **(ID No. ES-001-07)** shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

b. Visible emissions from the hexamine dryer **(ID No. ES-001-04)**, granular hexamine pneumatic transfer system **(ID No. ES-001-05)**, and pneumatic free-flow product transfer system **(ID No. ES-001-06)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2Q .0508(f)]

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.H.5.a. and/or b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

d. To assure compliance, once a week the Permittee shall observe the emission points of the Hexamine production facility **(ID No. ES-001-02)** for any visible emissions above normal. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1.H.5.a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

e. To assure compliance, once a month the Permittee shall observe the emission points of the Hexamine dryer **(ID No. ES-001-04)**, granular Hexamine pneumatic transfer system **(ID No. ES-001-05)**, pneumatic free-flow product transfer system **(ID No. ES-001-06)**, and the free-flow (pulverized) Hexamine bagging operation **(ID No. ES-001-07)** for any visible emissions above normal. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. Take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2610 (Method 9) is below the limit given in Section 2.1.H.5.a. and/or b. above, as applicable.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

f. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date and time of each recorded action;
   ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. The results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

g. Although a NOx plume is excluded from monitoring requirements under Section 2.1.H.5.d. above, if a NOx plume is observed within the monitoring period given in Section 2.1.H.5.d. above this should be documented in the logbook.

Reporting [15A NCAC 2Q .0508(f)]

h. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

I. Three Cooling Towers (ID Nos. ES-003-03, ES-003-05, and ES-003-06)

Lined Pond at Wastewater Treatment and associated wastewater streams (ID No. ES-005)

Nine (9) Wastewater Storage Vessels (ID No. ES-007.1, ES-007.2, ES-007.3, and ES-007.5 through ES-007.10)

- **26,000 gallon Environmental Regeneration Tank # 5**
- **19,100 gallon Environmental Regeneration Tank #1**
- **30,000 gallon Environmental Regeneration Tank #2**
- **20,000 gallon Environmental Intermediate Tank #6**
- **20,000 gallon Environmental Intermediate Tank #5**
- **22,000 gallon Wastewater tank associated with the Hexamine CMPU**
- **22,000 gallon Wastewater tank associated with the Hexamine CMPU**
- **22,000 gallon Wastewater tank associated with the Hexamine CMPU**
- **22,000 gallon Wastewater tank associated with the Hexamine CMPU**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	**Affected Sources: Cooling Towers Only** $E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
Visible Emissions	**Affected Sources: Cooling Towers Only** 20 percent opacity	15A NCAC 2D .0521
Hazardous Air Pollutants	**Affected Sources: ES-007.1, ES-007.2, ES-007.3, ES-007.5, and ES-007.6** Recordkeeping requirements	15A NCAC 2D. 1100 *40 CFR 63, Subpart G*
Volatile Organic Compounds	Work practice standards (See Section 2.2. B.1 – Multiple Emission Sources)	15A NCAC 2D .0958
Sulfur dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Toxic Air Pollutants	*State Enforceable Only* – Control of Toxic Air Pollutants (See Section 2.2. B.3 – Multiple Emission Sources)	15A NCAC 2D. 1100
Odors	*State Enforceable Only* – Control and Prohibition of Odorous Emissions (See Section 2.2. B.4 – Multiple Emission Sources)	15A NCAC 2D. 1806

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the three cooling towers **(ID Nos. ES-003-03, ES-003-05, and ES-003-06)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where, E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.I.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. The Permittee shall maintain records such that the process rates "P" in tons per hour, as specified by the formulas contained above (or the formulas contained in 15A NCAC 2D .0515) can be derived, and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained or the types of materials and finishes are not monitored.

Reporting [15A NCAC 2Q .0508(f)]

d. No reporting is required to show compliance with the particulate matter emissions standards for these cooling towers.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the three cooling towers **(ID Nos. ES-003-03, ES-003-05, and ES-003-06)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.I.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from these cooling towers.

3. 15A NCAC 2D .1111, MAXIMUM ACHEIVABLE CONTROL TECHNOLOGY – 40 CFR Part 63, Subpart G, Group 2 Wastewater Requirements

For emission sources **(ID Nos. ES-007.1, ES-007.2, ES-007.3, ES-007.5, and ES-007.6)**, the Permittee shall keep in a readily accessible location and made available to the DAQ on request the records specified below [40 CFR 63.147(b)(8)].

a. Each process unit identification and description.
b. Each stream identification code.
c. The concentration of 40 CFR 63, Subpart G - Table 9 compound(s) in parts per million, by weight and documentation of the methodology used to determine concentration.
d. Each flow rate in liter per minute.
e. The Permittee shall be deemed in non-compliance with 15A NCAC 2D .1111 if the recordkeeping requirements in Sections 2.1.I.3.a through d are not met.

J. Back-up boiler (ID No. ES-001-01T); Natural Gas/No. 2, No. 5, and/or No. 6 fuel oil-fired

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.39 pounds per million Btu heat input	15A NCAC 2D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .0521(d)
Nitrogen oxides	Less than 40 tons per 12-month period	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Sulfur dioxide	Less than 40 tons per 12-month period	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Hazardous Air Pollutants	No temporary, back-up boiler shall remain on-site for more than 180 consecutive days	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .1109*
Sulfur dioxide	Applicable to any back-up boiler that (1) commenced construction, reconstruction, or modification after June 9th, 1989 and (2) has a maximum heat input capacity equal to or greater than 10 MMBtu/hr: Sulfur content of fuel oil shall not exceed 0.5 percent by weight	15A NCAC 2D .0524 *40 CFR 60, Subpart Dc*
Sulfur dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
TAP	**State-Enforceable Only** Facility may only operate one boiler (either **ID No. ES-001-01 or ID No. ES-001-01T)** at any given time. (See Section 2.2. B.3.b. – Multiple Emission Sources)	15A NCAC 2D .1100

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas, No. 2, No. 5, and/or No. 6 fuel oil from any back-up boiler **(ID No. ES-001-01T)** shall not exceed 0.39 pounds per million Btu heat input.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.J.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for particulate matter emissions from the combustion of natural gas, No. 2, No. 5, and/or No. 6 fuel oil.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from any back-up boiler **(ID No. ES-001-01T)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.J.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required to demonstrate compliance with the SO_2 emission limitation for natural gas firing in the back-up boiler.

d. The Permittee shall monitor and record the sulfur content of the fuel oil in accordance with the requirements in Section 2.1. J.5.d. of this permit. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of fuel oil is not monitored as described above, or if the sulfur content exceeds the limit in Section 2.1.J.2.a. above.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the fuel oil supplier certifications postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from any back-up boiler **(ID No. ES-001-01T)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above any limit given in Section 2.1.J.3.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas or No. 2 fuel oil in the back-up boiler.

d. To assure compliance while combusting No. 5 fuel oil or No. 6 fuel oil, once a day the Permittee shall observe the emission points of the back-up boiler while firing these fuels for any visible emissions above normal. If visible emissions from the boilers are observed to be above normal, the Permittee shall either:
   i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1.J.3.a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

e. The results of the monitoring for No. 5 and No. 6 fuel oil firing shall be maintained in a log (written or electronic format) on-site and made available to an authorized representative upon request. The log shall record the following:
   i. The date and time of each recorded action;
   ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and,
   iii. The results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

f. The Permittee shall submit a summary report of the observations for No. 5 fuel oil and No. 6 fuel oil firing

postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid applicability of 15A NCAC 2D .0530(g) for major sources and major modifications, combined emissions from all back-up boiler(s) used at the facility **(ID No. ES-001-01T)** shall not exceed the following limits:
   i. Total sulfur dioxide (SO_2) emissions shall not exceed 40 tons during any consecutive 12-month period; and,
   ii. Total nitrogen oxide (NOx) emissions shall not exceed 40 tons during any consecutive 12-month period.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

b. The Permittee shall keep monthly records of fuel usage in a logbook (written or in electronic format), as follows:
   i. The total quantity (in mmscf) of natural gas fired in a back-up boiler;
   ii. The total quantity (in 1,000 gal) of No. 2 fuel oil fired in a back-up boiler;
   iii. The total quantity (in 1,000 gal) of No. 5 fuel oil fired in a back-up boiler;
   iv. The total quantity (in 1,000 gal) of No. 6 fuel oil fired in a back-up boiler; and,
   v. The fuel oil supplier certification for any fuel oil fired in a back-up boiler, including the sulfur content of the oil (in percent by weight).

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if records of the fuel usage and fuel oil sulfur content are not created and retained as required above.

c. Each calendar month, the Permittee shall calculate emissions from all back-up boilers **(ID No. ES-001-01T)** for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:
   i. Calculate SO_2 and NOx emissions from the previous calendar month using the following equations:

$$E_{SO_2} = 0.6(Q_{ng}) + 142(S_{fo2})(Q_{fo2}) + 157(S_{fo5})(Q_{fo5}) + 157(S_{fo6})(Q_{fo6})$$

$$E_{NO_x} = 100(Q_{ng}) + 20(Q_{fo2}) + 55(Q_{fo5}) + 55(Q_{fo6})$$

Where,

E_{SO2}	$=SO_2$ emissions (in lbs) during the previous calendar month;
E_{NOx}	$=NO_x$ emissions (in lbs) during the previous calendar month;
$S_{fo2, fo5, fo6}$	=Sulfur content in the No. 2, No. 5, or No. 6 fuel oil (in percent by weight); and,
Q_{ng}	=Quantity of natural gas fired at a back-up boiler during the previous calendar month (in mmscf).
$Q_{fo2, fo5, fo6}$	=Quantity of No. 2, No. 5, or No. 6 fuel oil fired at a back-up boiler during the previous calendar month (in 1,000 gal).

   ii. Sum the SO_2 emissions from all back-up boilers for the previous 12-month period to determine the 12-month rolling emission total
   iii. Sum the NO_x emissions from all back-up boilers for the previous 12-month period to determine the 12-month rolling emission total.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if records of the monthly calculations listed above are not retained or if one or more of the 12-month rolling emission totals are greater than the emission limits provided in Section 2.1.J.4.a. of this permit.

Reporting [15A NCAC 2Q .0508(f)]

d. *Semiannual Report.* The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. The monthly SO_2 and NO_x emissions from all back-up boilers for the previous 17 calendar months;
   ii. The 12-month rolling SO_2 and NO_x emissions for each 12-month period ending during the reporting period; and,
   iii. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .1109: Case-By-Case MACT

a. No temporary, back-up, boiler **(ID No. ES-001-01T)** shall be retained on-site for 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and is intended to perform the same or similar function will be included in calculating the consecutive time period. If any temporary boiler remains on-site for greater than 180 consecutive days, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

b. The Permittee shall maintain records of the dates that any temporary boiler is installed on-site and the dates that any temporary boilers are removed from the plant site. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if these records of are not created and retained as required above.

Notifications and Reports [15A NCAC 2Q .0508(f)]

c. *Initial Notification.* Within 7 days of installing any temporary, back-up boiler at the facility, the Permittee shall submit a written notification to the Regional Supervisor, DAQ. The notification shall indicate that actual date of the boiler installation, or where the notification is provided prior to such date, the anticipated date of boiler installation.

d. *Final Notification.* Within 7 days of removing any temporary, back-up boiler from the facility, the Permittee shall submit a written notification to the Regional Supervisor, DAQ. The notification shall indicate that actual date the boiler was removed from the plant site.

6. 15A NCAC 2D .0524: New Source Performance Standards (40 CFR 60, SUBPART Dc)

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524, "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart Dc, including Subpart A "General Provisions."

Emission/Sulfur Content Limitation [15A NCAC 2D .0524]

b. The maximum sulfur content of any fuel oil received and burned in an affected back-up boiler **(ID No. ES-001-01T)** shall not exceed **0.5 percent by weight**. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if sulfur content of any fuel oil fired at the facility exceeds this limitation.

Monitoring/Recordkeeping [40 CFR 60.48c(g)(2), 40 CFR 60.46c(e), 40 CFR 60.48c(f)(1)-(2)]

c. Each calendar month, the Permittee shall record the total quantity of each fuel fired in any NSPS-affected back-up boiler during the previous calendar month. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if it fails to create and retain the required records.

d. The Permittee shall maintain fuel supplier certifications for each shipment of fuel oil received. The fuel supplier certification(s) shall include the following information:
   i. For distillate (No. 2) fuel oil:
      (A) The name of the oil supplier;
      (B) A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR 60.41c; and,
      (C) The sulfur content of the oil.
   ii. For residual (No. 5 and No. 6) fuel oils:
      (A) The name of the oil supplier;
      (B) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;
      (C) The sulfur content of the oil from which the shipment came (or the shipment itself); and
      (D) The method used to determine the sulfur content of the oil.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the sulfur content of fuel oils is not monitored as described above, or if the sulfur content exceeds the limit in Section 2.1.J.6.b. above.

Notifications [40 CFR 60.7(a)(1)]

e. The Permittee shall submit a written initial notification of the date of actual, initial startup of any NSPS-affected back-up boiler **(ID No. ES-001-01T)** within 15 days of such date. The notification shall be submitted to the Regional Supervisor.

Reporting [40 CFR 60.48c(e)(11), 40 CFR 60.48c(j)]

f. The Permittee shall submit a written semiannual summary report to NC DAQ postmarked on or before January 30th of each calendar year for the preceding 6-month period between July and December and by July 30th of each

calendar year for the preceding 6-month period between January and June. The summary report shall include the following:

i. Calendar dates covered in the reporting period;
ii. Fuel supplier certification(s) for each distillate and/or residual fuel oil, as provided in Section 2.1.J.6.d. of this permit;
iii. A certified statement signed by the owner or operator that the records of fuel supplier certification(s) submitted represent all of the fuel fired at the affected boiler during the semiannual period; and,
iv. All instances of deviations with 15A NCAC 2D .0524 as provided in this permit during the reporting period.

K. Publicly-Owned Treatment Works (ID No. ES-POTW) consisting of Two Biotreatment Areas, a Pre-Equalization Tank, a Post-Equalization Tank, a Digester, and a Sand Filter

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	Work practice standards (See Section 2.2. B.1 – Multiple Emission Sources)	15A NCAC 2D .0958
Toxic Air Pollutants	*State Enforceable Only* – Control of Toxic Air Pollutants (See Section 2.2. B.3 – Multiple Emission Sources)	15A NCAC 2D. 1100
Odors	*State Enforceable Only* – Control and Prohibition of Odorous Emissions (See Section 2.2. B.4 – Multiple Emission Sources)	15A NCAC 2D. 1806

2.2 - Multiple Emission Source(s) Specific Limitations and Conditions

A. All HON-Affected Fugitive Emission Sources, Closed Vent Systems, and Control Devices (40 CFR 63, Subpart H, F, and G) (ID Nos. ES-002-Fug-01 and ES-001-Fug03), Including Surge Control Vessels (ID Nos. ES-001-02.8-5 and ES-001-02.8-6)

All MON-Affected Fugitive Emission Sources, Closed Vent Systems, and Control Devices (40 CFR 63, Subpart FFFF) (ID No. ES-002-Fug-02)

The following table provides a summary of limits and standards for the emission source(s) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	LDAR program and equipment specifications	15A NCAC 2D .1111 *40 CFR 63, Subpart H and 40 CFR 63, Subpart FFFF*
Hazardous Air Pollutants	Closed vent system requirements	15A NCAC 2D .1111 *40 CFR 63, Subpart H and 40 CFR 63, Subpart FFFF*

1. 15A NCAC 2D .1111: MACT for 40 CFR 63, SUBPART H: HAZARDOUS ORGANIC NESHAP ("HON") for EQUIPMENT LEAKS and EQUIPMENT SPECIFICATION
(Requirements also referenced by 40 CFR 63, SUBPART FFFF)

a. The requirements specified in this permit condition apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels **(ID Nos. ES-001-02.8-5 and ES-001-02.8-6)**, bottoms receivers, instrumentation systems, and control devices or closed vent systems that are part of the affected source subject to 40 CFR 63, Subpart G, including the Formaldehyde CMPU **(ID No. ES-002-Fug-01)** and Hexamine Production Facility **(ID No. ES-001-Fug03)**, or that are part of the affected source subject to 40 CFR 63, Subpart FFFF, including the Special Projects CMPU **(ID No. ES-002-Fug-02)**.

i. Standards - General

(A) Compliance with these requirements will be determined by review of records required by 40 CFR 63.181, reports required by 40 CFR 63.182, review of performance test results and inspections.

(B) Each piece of equipment in a process unit to which this subpart applies shall be identified so that it can be readily distinguished from equipment that is not subject to this subpart.

(C) When each leak is detected as specified 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168 and 40 CFR 63.169; and 40 CFR 63.172 through 40 CFR 63.174, a weatherproof, readily visible identification marked with the equipment identification number shall be attached to the leaking equipment. The identification may be removed according to the procedures in 40 CFR 63.162(f)(2) and (3) as applicable.

(D) In all cases where the provisions of this subpart require an owner or operator to repair leaks by a specified time after the leak is detected, it is a violation of this subpart to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified time, failure of that action to successfully repair the leak is not a violation of this subpart. However, if the repairs are unsuccessful, a leak is detected and the owner or operator shall take further action as required by applicable provisions of this subpart.

ii. Pumps in Light Liquid Service

(A) The Permittee shall comply with all applicable requirements of 40 CFR 63.163. To ensure compliance for all pumps in light liquid service associated with the affected source, as a minimum, the Permittee shall monitor on a monthly basis each pump in light liquid service to detect leaks by the method specified in 40 CFR 63 .180(b). A leak is determined by an instrument reading of 1000 ppm or greater (processes at this facility do not handle polymerizing monomers, 5000 ppm leak threshold, or have pumps in food/medical service, 2000 ppm leak threshold). Repair is not required unless an instrument reading of 2000 ppm or greater is detected.

(B) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.163(c)(3) and 40 CFR 63.171. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(C) If, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in a process unit leak, the Permittee shall implement a quality improvement program for pumps that complies

with the requirements of 40 CFR 63.176. The percent of leaking pumps shall be calculated according to the requirements in 40 CFR 63.163(d).

Compressors

(A) The Permittee shall comply with all applicable requirements of 40 CFR 63.164. Each compressor shall be equipped with a seal system that includes a barrier fluid system meeting the requirements of 40 CFR 63.164(b) and (c), and that prevents leakage of process fluid to the atmosphere except as provided by 40 CFR 63.164(h) and (i).

(B) Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system or both. Each sensor shall be observed daily or equipped with an alarm according to 40 CFR 63.164(e). A leak is determined if the sensor indicates failure of the seal system, barrier fluid system or both.

(C) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.163(c)(3) and 40 CFR 63.171. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

iii. Pressure Relief Devices in Gas/Vapor Service

(A) The Permittee shall comply with all applicable requirements of 40 CFR 63.165. Each pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 ppm above background as measured by the method specified in 40 CFR 63.180(c) except as provided in 40 CFR 63.165(b).

(B) After each pressure release, the pressure relief device shall be returned to a condition indicated by a an instrument reading of less than 500 ppm above background as soon as practicable, but no later than 5 calendar days after each pressure release except as provided in 40 CFR 63.171. The pressure relief device shall be monitored no later than 5 calendar days after the pressure release and returning to organic HAP service.

iv. Sampling Connection Systems

The Permittee shall comply with all applicable requirements of 40 CFR 63.166. Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed vent system meeting the requirements of 40 CFR 63.165(b). Gases displaced during filling of the sample container are not required to be collected or captured.

v. Open-ended Valves or Lines

The Permittee shall comply with all applicable requirements of 40 CFR 63.167. Each open-ended valve or line shall be equipped with a cap, blind flange, or a second valve operated in accordance with 40 CFR 63.167(b) and (c), except as provided in 40 CFR 63.167(d) and (e). The cap, blind flange, or a second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair.

vi. Valves in Gas/Vapor Service and In Light Liquid Service

(A) The Permittee shall comply with all applicable requirements of 40 CFR 63.168. The Permittee shall monitor all valves to detect leaks by the method specified in 40 CFR 63.180(b) at the intervals specified in 40 CFR 63.168(d) except as provided in 40 CFR 63.168(h) and (i). A leak is determined by an instrument reading of 500 ppm or greater.

(B) At process units with 2 percent or greater leaking valves the Permittee shall monitor each valve once per month. At process units with less than 2 percent leaking valves, the Permittee shall monitor each valve once each quarter. At process units with less than 1 percent leaking valves, the Permittee may monitor each valve once every 2 quarters. At Process units with less than 0.5 percent leaking valves, the Permittee may monitor each valve once per 4 quarters. Percent leaking valves shall be determined according to 40 CFR 63. 168(e).

(C) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(D) When a leak has been repaired it shall be monitored at least once within the first three months after its repair as specified in 40 CFR 63.168(f)(3).

vii. Pumps, Valves, Connectors, Agitators in Heavy Liquid Service; Instrumentation Systems; and Pressure Relief Devices in Liquid Service

(A) The Permittee shall comply with all applicable requirements of 40 CFR 63.169. Pumps, valves, connectors, agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service shall be monitored within 5 calendar days by the method specified in 40 CFR 63.180(b) if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If the potential leak is repaired according to 40 CFR 63.168(c) and (d), it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.180(b).

(B) If an instrument reading of 10,000 ppm or greater for agitators, 2000 ppm or greater for pumps, or 500 ppm or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected.

(C) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

viii. Surge Control Vessels and Bottoms Receivers. The Permittee shall comply with all applicable requirements of 40 CFR 63.170. Each surge control vessel or bottoms receiver that is not routed back to the process and meets the conditions specified in table 2 or 3 of 40 CFR 63 Subpart H shall be equipped with a closed vent system that routes vented organic vapors back to the process or to a control device that complies with the requirements of 40 CFR 63.172, or 40 CFR 63.119(b) or (c) of Subpart G.

ix. Closed Vent Systems and Control Devices

(A) The Permittee shall comply with all applicable requirements of 40 CFR 63.172 for closed-vent systems and control devices used to comply with the provisions of Subpart H.

(B) Recovery or recapture devices (e.g. condensers and absorbers) shall be designed and operated to recover at least 95 percent of the organic HAP or VOC vented to them or reduce the exit concentration to an exit concentration of 20 ppmv, whichever is less stringent

(C) Enclosed combustion devices shall be designed and operated to reduce the organic HAP or VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 C.

(D) The Permittee shall monitor all control devices used to comply with the provisions of 40 CFR 63 Subpart H to ensure that they are operated and maintained in conformance with their design.

(E) Except as provided in 40 CFR 63.172(k) and (l), each closed-vent system shall be inspected according to the procedures and schedule specified in 40 CFR 63.172(f)(1) and (f)(2).

(F) Each closed-vent system shall be inspected according to the procedures in 40 CFR 63.182(b).

(G) A leak is indicated by an instrument reading of 500 ppm or greater above background or by visual inspection.

(H) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171, except as provided in 40 CFR 63.172(i). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(I) For each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the Permittee shall comply with the provisions of 40 CFR 63.172(j)(1) or (j)(2), except as provided in 40 CFR 63.172(j)(3).

(J) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with 40 CFR 63 Subpart H, such system or control device shall be operating.

x. Agitators in Gas/Vapor Service and In Light Liquid Service

(A) The Permittee shall comply with all applicable requirements of 40 CFR 63.173 except as provided in 40 CFR 63.173(d), (e), (f), (g), (h), and (i). Each agitator shall be monitored monthly to detect leaks by the method specified in 40 CFR 63.180(b). A leak is detected if an instrument reading of 10,000 ppm or greater is measured.

(B) Each agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator. A leak is detected if indications of liquids dripping from the agitator are detected.

(C) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171, except as provided in 40 CFR 63.172(i). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

xi. Connectors in Gas/Vapor Service and in Light Liquid Service

(A) The Permittee shall comply with all applicable requirements of 40 CFR 63.174 except as provided in 40 CFR 63.174(f), (g), (h), and (j). The Permittee shall monitor all connectors in gas/vapor and light liquid service, except as provide in 40 CFR 63.174(f) through (h) at the intervals specified in 40 CFR 63.174(b). The connectors shall be monitored to detect leaks by the method specified in 40 CFR 63.180(b). A leak is detected if an instrument reading of 500 ppm or greater is measured. The Permittee shall monitor connectors once per year if the percent leaking connectors in the process unit was 0.5 percent or greater during the last required monitoring period. The Permittee shall monitor connectors once every 2 years if the percent leaking connectors in the process unit was less than 0.5 percent during the last required monitoring period. The Permittee may monitor connectors once every 4 years if the percent leaking connectors calculated for a process unit in a biennial leak detection and repair program is less than 0.5 percent. If a process unit using a 4-year monitoring interval program has 0.5 percent or greater but less than 1 percent leaking connectors, the Permittee shall increase monitoring frequency to once every 2 years. If a process unit using a 4-year monitoring interval program has 1 percent or greater leaking

connectors, the Permittee shall increase monitoring frequency to one time per year. The percent leaking connectors shall be calculated as specified in 40 CFR 63.174(1) and (2).

(B) Except as provided in 40 CFR 63.174(c)(ii), each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks when it is reconnected or within 3 months after being returned to organic HAP service. If a leak is detected it shall be repaired according to the provisions of paragraph (iii) and 40 CFR 63.174(d) unless it is determined to be nonrepairable as provided in 40 CFR 63.174(c)(i).

(C) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171, except as provided in 40 CFR 63.172(i). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

Recordkeeping [15A NCAC 2Q .0508(f)]

b. The Permittee shall comply with all applicable recordkeeping requirements as prescribed in 40 CFR 63.181 including:
   i. A list of identification numbers for equipment subject to 40 CFR 63 Subpart H as required by 40 CFR 63.181(b)(1).
   ii. A list of identification numbers for equipment that the Permittee elects to equip with a closed-vent system and control device under the provisions of 40 CFR 63.163(g), 40 CFR 63.164(h), 40 CFR 63.165(c), or 40 CFR 63.173(f).
   iii. A list of identification numbers for pressure relief devices subject to the provisions in 40 CFR 63.165(d).
   iv. Identification of screwed connectors subject to the requirements 40 CFR 63.174(c).
   v. The information required under 40 CFR 63.181(b)(6) for each dual mechanical seal system.
   vi. The information required under 40 CFR 63.181(b)(7) pertaining to all pumps subject to 40 CFR 63.163(j), valves subject to 40 CFR 63.168(h) and (i), agitators subject to 40 CFR 63.173(h) through (j), and connectors subject to 40 CFR 63.174(f) and (g).
   vii. A list of valves removed from and added to the process unit as described in 40 CFR 63.168(e)(1).
   viii. A list of connectors removed from and added to the process unit as described in 40 CFR 63.174(i)(1) and documentation of the integrity of the weld from any removed connectors as required in 40 CFR 63.174(j).
   ix. The information required under 40 CFR 63.181(b)(9) for batch process units.
   x. For visual inspections of equipment subject to the provisions of 49 CFR 63, Subpart H, the Permittee shall document that the inspection was conducted and the date of the inspection.
   xi. When a leak is detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168 and 40 CFR 63.169 and 40 CFR 63.172 through 40 CFR 63.174, the information required under 40 CFR 63.181(d) shall be recorded.
   xii. The information required under 40 CFR 63.181(e) for batch processes the Permittee elects to pressure test to demonstrate compliance.
   xiii. The dates, results and other information required under 40 CFR 63.181(f) of each compliance test for compressors subject to 40 CFR 63.164(i) and monitoring following a pressure release for each pressure release device subject to 40 CFR 63.165(a) and (b).
   xiv. Records of the information required by 40 CFR 63.181(g) for closed-vent systems and control devices subject to 40 CFR 63.172.
   xv. The information required under 40 CFR 63.181(h) or process units subject to the requirements of 40 CFR 63.175 and 40 CFR 63.176 for quality improvement programs.
   xvi. The information required under 40 CFR 63.181(i) for equipment in heavy liquid service.
   xvii. Identification of equipment in organic HAP service less than 300 hours per year within a process unit subject to 40 CFR 63 Subpart H.

   All records and information required under 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

c. The Permittee shall identify all HAP emission points, including those subject to and emission points not subject to 40 CFR 63 Subparts F, G, and H. Such information shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DENR upon request.

Reporting [15A NCAC 2Q .0508(f)]

d. The Permittee shall submit Semiannual Periodic Reports within 60 days after the end of each 6-month period. The applicable reporting periods for this affected source are July through December and January through June. At a minimum the periodic reports shall include:
   i. The number of valves for which leaks were detected as described in 40 CFR 63.168(b), the percent leakers, and the total number of valves monitored;
   ii. The number of valves for which leaks were not repaired as required in 40 CFR 63.168(f), identifying the number of those that are determined nonrepairable;

iii. The number of pumps for which leaks were detected as described in 40 CFR 63.163(b), the percent leakers, and the total number of pumps monitored;
iv. The number of pumps for which leaks were not repaired as required in 40 CFR 63.163(c);
v. The number of compressors for which leaks were detected as described in 40 CFR 63.164(f);
vi. The number of compressors for which leaks were not repaired as required in 40 CFR 63.164(g) of this subpart;
vii. The number of agitators for which leaks were detected as described in 40 CFR 63.173(a) and (b);
viii. The number of agitators for which leaks were not repaired as required in 40 CFR 63.173(c);
ix. The number of connectors for which leaks were detected as described in 40 CFR 63.174(a), the percent of connectors leaking, and the total number of connectors monitored;
x. The number of connectors for which leaks were not repaired as required in 40 CFR 63.174(d), identifying the number of those that are determined nonrepairable;
xi. The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.
xii. The results of all monitoring to show compliance with 40 CFR 63.164(i), 40 CFR 63.165(a), and 40 CFR 63.172(f) conducted within the semiannual reporting period.
xiii. If applicable, the initiation of a monthly monitoring program under 40 CFR 63.168(d)(1)(i), or a quality improvement program under either 40 CFR 63.175 or 40 CFR 63.176.
xiv. If applicable, notification of a change in connector monitoring alternatives as described in 40 CFR 63.174(c)(1) of this subpart.
xv. If applicable, the compliance option that has been selected under 40 CFR 63.172(n).
xvi. Periodic reports shall be submitted within 60 days after the end of each six-month period. The applicable reporting periods for this affected source are July through December and January through June.

2. 15A NCAC 2D .1111: MACT for 40 CFR 63, SUBPART G: HAZARDOUS ORGANIC NESHAP ("HON") for VAPOR COLLECTION and CLOSED VENT SYSTEMS
(Requirements also referenced by 40 CFR 63, SUBPART FFFF)

a. Except as provided in 40 CFR 63.148(g) and (h), each vapor collection system and closed vent system shall be inspected according to the procedures and schedule specified in 40 CFR 63.148(b)(1) and (2), and 40 CFR 63.148(c).
   i. If the system is constructed of hard-piping, the conduct annual visual inspections for visible, audible, or olfactory indications of leaks.
   ii. If the system is constructed of ductwork, the owner or operator shall:
      (A) Conduct annual inspections using Method 21 in accordance with 30 CFR 63.148(c)(1)-(6); and,
      (B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

   A leak is indicated by an instrument reading of 500 ppm or greater above background or by visual inspection. [40 CFR 63.148(b), (d)]
b. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.148(d)(3) and 40 CFR 63.148(e). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [40 CFR 63.148(d)]
c. For each vapor collection system or closed-vent system that contains by-pass lines that could divert a vent stream away from the control device and to the atmosphere, the Permittee shall either comply with the provisions of either.
   i. Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. Records shall be generated as specified in 40 CFR 63.118(a)(3). The flow indicator shall be installed at the entrance to any bypass line; or
   ii. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

   [40 CFR 63.148(f)]

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

d. The Permittee shall identify of all parts of the system that are designated as unsafe to inspect, provide an explanation of why the equipment is unsafe to inspect, and describe and implement a plan for inspecting the equipment. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained. [40 CFR 63.148(i)(1)]
e. The Permittee shall identify of all parts of the system that are designated as difficult to inspect, provide an explanation of why the equipment is difficult to inspect, and describe and implement a plan for inspecting the equipment. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained. [40 CFR 63.148(i)(2)]
f. For each vapor collection system or closed-vent system that contains by-pass lines that could divert a vent stream away from the control device and to the atmosphere, the Permittee shall create and maintain the following records:

i. Where a flow indicator is used, hourly records of whether the flow indicator was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.
ii. Where a seal mechanism is used, record whether the monthly visual inspection of the seals or closure mechanisms has been done, record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type configuration has been checked out, and record any occurrence of any broken car-seal.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained. [40 CFR 63.148(i)(3)]

g. For each inspection during which a leak is detected, create and maintain a record of the following:
i. The instrument identification numbers; operator name or initials; and identification of the equipment.
ii. The date the leak was detected and the date of the first attempt to repair the leak.
iii. Maximum instrument reading measured by Method 21 after the leak is successfully repaired or determined to be nonrepairable.
iv. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
v. The name, initials, or other form of identification of the owner or operator (or designee) whose decision it was that repair could not be effected without a shutdown.
vi. The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.
vii. Dates of shutdowns that occur while the equipment is unrepaired.
viii. The date of successful repair of the leak.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained. [40 CFR 63.148(i)(4)]

h. For each visual inspection during which no leaks are detected, create and maintain a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained. [40 CFR 63.148(i)(5)]

Reporting [15A NCAC 2Q .0508(f)]

i. The Permittee shall submit Semiannual Periodic Reports within 60 days after the end of each 6-month period. The applicable reporting periods for this affected source are July through December and January through June. The report shall include:
i. Records of each inspection during which a leak is detected, as described in Section 2.2.A.2.g of this permit.
ii. Records of all times when a vent stream is diverted from the control device through a bypass line; and,
iii. Records of all periods during which a seal mechanism is broken, a bypass line valve position has changed, or a key to unlock the bypass line valve was checked out.

B. All Emission Sources

The following table provides a summary of limits and standards for the emission source(s) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	Work practice standards	15A NCAC 2D .0958
Sulfur dioxide	Facility-wide SO_2 emissions shall not exceed 100 tons per consecutive 12-month period. (See Section 2.2. B.2. – Multiple Emission Sources)	15A NCAC 2Q .0317 *Avoidance of 15A NCAC 2D .0530*
Toxic Air Pollutants	Control of Toxic Air Pollutants; **State-enforceable only**	15A NCAC 2D. 1100
Odor	Control and Prohibition of Odorous Emissions; **State-enforceable only**	15A NCAC 2D .1806

1. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

a. Pursuant to 15A NCAC 2D .0958, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions; the Permittee shall:
   i. Store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
   ii. Clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
   iii. Store wipe rags containing volatile organic compounds in closed containers,
   iv. Not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
   v. Transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
   vi. Clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]

b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
   i. Flush parts in the freeboard area,
   ii. Take precautions to reduce the pooling of solvent on and in the parts,
   iii. Tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
   iv. Not fill cleaning machines above the fill line,
   v. Not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds. The inspections shall be conducted during normal operations. If the required inspections are not conducted the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date and time of each inspection; and
   ii. The results of each inspection noting whether or not noncompliant conditions were observed.
   If the required records are not maintained the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for

the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2Q .0317: AVOIDANCE CONDITION for 15A NCAC 2D .0530: FACILITY-WIDE SO_2 EMISSIONS LIMITATION TO MAINTAIN MINOR STATUS UNDER THE PSD PERMITTING PROGRAM

a. In order to maintain minor source status under the PSD permitting program pursuant to 15A NCAC 2D .0530, the Permittee shall limit facility-wide sulfur dioxide (SO_2) emissions to less than 100 tons per consecutive 12-month period.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

b. The Permittee shall keep monthly records of total fuel usage at all combustion sources in a logbook (written or in electronic format), as follows:
   i. The total quantity (in mmscf) of natural gas fired;
   ii. The total quantity (in 1,000 gal) of No. 2 fuel oil fired;
   iii. The total quantity (in 1,000 gal) of No. 5 fuel oil fired;
   iv. The total quantity (in 1,000 gal) of No. 6 fuel oil fired; and,
   v. The fuel oil supplier certification for any fuel oil fired, including the sulfur content of the oil (in percent by weight).

   The Permittee shall be deemed an existing major source under 15A NCAC 2D .0530 if records of the fuel usage and fuel oil sulfur content are not created and retained as required above.

c. Each calendar month, the Permittee shall calculate facility-wide SO2 emissions from fuel combustion for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formula:
   i. Calculate SO_2 emissions from the previous calendar month using the following equation:

$$E_{SO_2} = 0.6(Q_{ng}) + 142(S_{fo2})(Q_{fo2}) + 157(S_{fo5})(Q_{fo5}) + 157(S_{fo6})(Q_{fo6})$$

Where,

E_{SO2}	= SO_2 emissions (in lbs) during the previous calendar month;
$S_{fo2, fo5, fo6}$	= Sulfur content in the No. 2, No. 5, or No. 6 fuel oil (in percent by weight); and,
Q_{ng}	= Quantity of natural gas fired during the previous calendar month (in mmscf).
$Q_{fo2, fo5, fo6}$	= Quantity of No. 2, No. 5, or No. 6 fuel oil fired during the previous calendar month (in 1,000 gal).

   ii. Sum the SO_2 emissions from all fuel combustion, and from any other SO_2 emissions source, for the previous 12-month period to determine the 12-month rolling emission total.

   The Permittee shall be deemed an existing major source under 15A NCAC 2D .0530 if records of the monthly calculations listed above are not retained or if one or more of the 12-month rolling emission totals are greater than the emission limit provided in Section 2.2.B.a. of this permit.

Reporting [15A NCAC 2Q .0508(f)]

d. *Semiannual Report.* The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. The monthly, facility-wide SO_2 emissions for the previous 17 calendar months;
   ii. The 12-month rolling SO_2 emissions for each 12-month period ending during the reporting period; and,
   iii. All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ENFORCEABLE ONLY

3. 15A NCAC 2D .1100: CONTROL OF TOXIC AIR POLLUTANTS

a. Pursuant to 15A NCAC 2D .1100, "Control of Toxic Air Pollutants," and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:
   i. Arsenic. Total arsenic emissions from boiler **(ID No. ES-001-01T)** shall not exceed 0.80 pounds per year.
   ii. Beryllium. Total beryllium emissions from boiler **(ID No. ES-001-01T)** shall not exceed 0.28 pounds per year.
   iii. Chromium VI equivalent. Total soluble chromate compound emissions from boiler **(ID No. ES-001-01T)**, measured as chromium VI equivalent, shall not exceed 4.13e-04 pounds per day.

iv. Nickel. Total soluble nickel emissions from boiler **(ID No. ES-001-01T)**, measured as nickel, shall not exceed 0.32 pounds per day

v. Ammonia and Formaldehyde. Ammonia and Formaldehyde emissions shall not exceed any rate listed in the following table:

Emissions Source	Allowable Emission Rate	
	Ammonia	**Formaldehyde**
Boiler **(ID No. ES-001-01T)**	0.14 lb/hr	8.23e-03 lb/hr
Cooling Tower No. 3 **(ID No. ES-003-03)**	0.37 lb/hr	0.09 lb/hr
Cooling Tower No. 5 **(ID No. ES-003-05)**	0.25 lb/hr	0.06 lb/hr
Cooling Tower No. 6 **(ID No. ES-003-06)**	0.25 lb/hr	0.06 lb/hr
Environmental Intermediate Tank #1 **(ID No. ES-T30)**		1.78e-04 lb/hr
Environmental Intermediate Tank #2 **(ID No. ES-T31)**		1.78e-04 lb/hr
Environmental Intermediate Tank #3 **(ID No. ES-T32)**		1.78e-04 lb/hr
Environmental Feed Tank #1 **(ID No. ES-T27)**		1.78e-04 lb/hr
Environmental Feed Tank #2 **(ID No. ES-T28)**		1.78e-04 lb/hr
Environmental Feed Tank #3 **(ID No. ES-T29)**		1.78e-04 lb/hr
Wastewater tank for the hexamine CMPU **(ID No. ES-007.7)**		1.78e-04 lb/hr
Wastewater tank for the hexamine CMPU **(ID No. ES-007.8)**		1.78e-04 lb/hr
Wastewater tank for the hexamine CMPU **(ID No. ES-007.9)**		1.78e-04 lb/hr
Wastewater tanks for the hexamine CMPU **(ID No. ES-007.10)**		1.78e-04 lb/hr
Green Overheads Wastewater Tank **(ID No. ES-T53)**	0.03 lb/hr	4.42e-05 lb/hr
Wastewater Treatment Plant **(ID No. ES-POTW)**, including:		
• Biotreatment Area 2	4.22e-04 lb/hr	3.44e-04 lb/hr
• Pre-Equalization Tank	0.01 lb/hr	5.83e-03 lb/hr
• Biotreatment Area 1	4.22e-04 lb/hr	3.44e-04 lb/hr
• Post-Equalization Tank	3.56e-05 lb/hr	2.79e-05 lb/hr
• Digester,	3.02e-06 lb/hr	1.60e-06 lb/hr
• Sand filter	2.25e-06 lb/hr	1.75e-06 lb/hr
Lined Pond at the POTW **(ID No. ES-005)**	6.75e-3b/hr	2.51-03 b/hr
Aqua Ammonia Unloading Operation **(ID No. ES-NH3)**, including:		
• Area 1	0.67 lb/hr	
• Area 2	0.67 lb/hr	

Recordkeeping

b. To comply with the TAP emissions limitations in Section 2.2.B.3.a. above, the Permittee may only fire one boiler **(ID No. ES-001-01 or ID No. ES-001-01T)** at any given time.

c. The Permittee shall retain records of TAP emissions from each of the affected sources as listed above. The record shall include calculations and supporting data. Required records of emission rates and emissions calculations shall be maintained in a logbook. The logbook (in written or electronic form) shall be kept on-site and made available to DAQ personnel upon request.

STATE-ENFORCEABLE ONLY

4. 15A NCAC 2D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

SECTION 3 - GENERAL CONDITIONS (version 4.0 12/17/15)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]
The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY
The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 02Q .0514]
   The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
   The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]
   The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]
   The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]
   The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements
   Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
   a. changes in the information submitted in the application;
   b. changes that modify equipment or processes; or
   c. changes in the quantity or quality of materials processed.

   If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
   a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
   b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
      i. the changes are not a modification under Title I of the Federal Clean Air Act;
      ii. the changes do not cause the allowable emissions under the permit to be exceeded;
      iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
      iv. the Permittee shall attach the notice to the relevant permit.
   c. The written notification shall include:
      i. a description of the change;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.
   d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
   The Permittee may make changes in the operation or emissions without revising the permit if:
   a. the change affects only insignificant activities and the activities remain insignificant after the change; or
   b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]
   To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A **Reporting Requirements for Excess Emissions and Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]
"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. *(Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.)*

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
    a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
        i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
            - name and location of the facility;
            - nature and cause of the malfunction or breakdown;
            - time when the malfunction or breakdown is first observed;
            - expected duration; and
            - estimated rate of emissions;
        ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
        iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
    a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B **Other Requirements under 15A NCAC 02D .0535**
The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. **Emergency Provisions** [40 CFR 70.6(g)]
The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.

3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]
This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]
It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]
1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]
The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]
The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);

3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]
A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
   a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
   b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
   c. the applicable requirements under Title IV; or
   d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]
The Director may terminate, modify, or revoke and reissue this permit if:
1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]
Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]
This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]
1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
   a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
   b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
   c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
   d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

   Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]
1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]
The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q. 0508(i)(9)]
Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]
A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]
The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History [**15A NCAC 02Q .0507(d)(4)]
The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(e)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]
If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) –** FEDERALLY-ENFORCEABLE ONLY
Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]
This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. **Air Pollution Emergency Episode** [15A NCAC 02D .0300]
Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0202]
The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]
In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]
Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
    a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
        i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
        ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
        iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. **Reopening for Cause** [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
    a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
    b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;

c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 02Q .0508(i)(16)]
The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. **Fugitive Dust Control Requirement** [15A NCAC 02D .0540] - STATE ENFORCEABLE ONLY
As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. **Specific Permit Modifications** [15A NCAC 02Q.0501 and .0523]
1. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
   a. a description of the change at the facility;
   b. the date on which the change will occur;
   c. any change in emissions; and
   d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]
For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound